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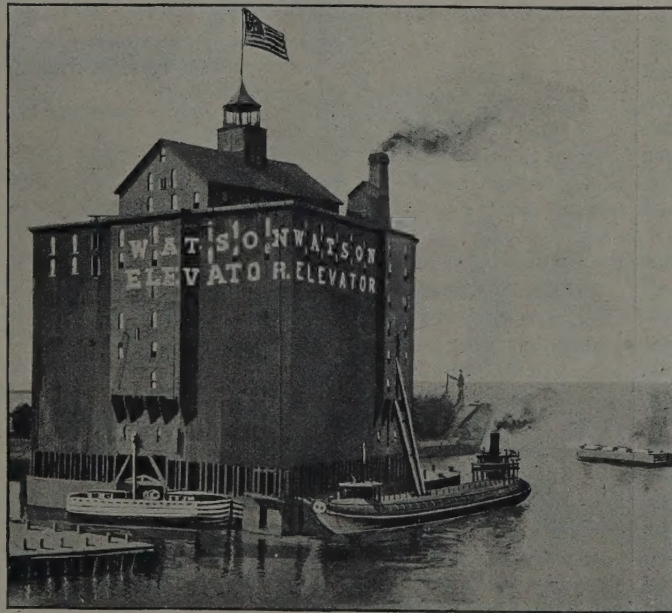
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THE WATSON ELEVATOR AT BUFFALO, N. Y.

As a grain transfer point Buffalo leads all others, not in facilities for transferring grain, but in the amount of grain actually handled. It is not a great grain market, but merely an advantageous point for the transshipment of eastbound grain from lake vessels to cars and canal boats. Little of the grain received there remains in store, after cars or canal boats can be secured to forward it, yet all of that which is transferred by the storage elevators is taxed one-fourth of a cent for ten days' storage as well as five-eighths of a cent for transferring. If the charge for transferring was reduced to a reasonable amount much more would go via that port, but as long as the pool has control of the elevators a reduction cannot be expected.

Every year the grain traffic of other routes increases, yet not at the expense of the Buffalo route, which increases as much as any of the others and more than most of the routes. Frequently more has been shipped by the Buffalo route than all others combined, and this year promises to leave all previous records far in the rear. The fact that grain can go from several of the principal primary grain markets of the West to New York by water and thereby reach the foreign markets at a much lower freight rate is the chief factor in making the Buffalo route the leading one. Blockades and extortionate rates at Buffalo have done much to divert grain to the Canadian all-water route, which is also being improved for the better accommodation of the export grain trade of the lake district. At the close of the present season Buffalo will have its grain storage and transfer facilities greatly increased by the addition of several modern elevators. Two years ago Buffalo had 37 storage elevators, 6 of these were unused and the remainder had storage room for but 16,575,000 bushels. In his annual report the Secretary of the Merchants' Exchange stated that 20 per cent. of this capacity should be deducted for storage of remnants, workingroom and elevators out of repair. That year there were six transfer elevators and eight floaters in the harbor also, and more have been added, as the port is well equipped to handle the enormous quantity of grain which is now moving to the seaboard.

Some of the old houses have been improved, so that they can transfer much more than heretofore, and there is not near so much prospect of a blockade at that port this year as the chronic pessimists seem to think. One of the elevators improved is the 600,000-bushel Watson elevator illustrated herewith, which is advantageously located for handling grain going through by water. This elevator is in charge of Carlton T. Ladd, a progressive elevator superintendent, who has designed several valuable improvements in grain handling machinery. The elevator



THE WATSON ELEVATOR AT BUFFALO, N. Y.

is now thoroughly equipped with modern machinery and has a large handling capacity. It is built on piling, cribbed and covered with corrugated iron. It is of unusual shape, still its interior arrangement is such that grain can be handled conveniently and economically.

Twenty-eight vessels were chartered for wheat at San Francisco, Cal., in July. There were three charters to South America, two for Africa, one for Australia and twenty-two to Europe.

A car of new spring wheat was received at Chicago July 26, said to be from Nebraska. It graded No. 2. Last year the first car was received on July 27, and also came from Nebraska, but graded No. 3.

MINNESOTA ELEVATOR MEN MUST KEEP BOOKS.

The Secretary of the Minneapolis Railroad and Warehouse Commission has issued a notice to the country elevator men of that state, which, if strictly enforced, will arouse more of the elevator men to oppose the unjust regulations of the paternalistic law. In the fact that the land on which the elevators stand was secured by condemnation proceedings for railway purposes, the state finds the slim excuse for the attempted regulation of the business conducted in them. The notice relates to the keeping of books and is as follows:

"From and after September 1, all country elevator owners, or lessees of the same, are required to keep in each licensed house a book, properly ruled for the purpose, and each agent of such house shall enter therein in the proper column, at the end of each week, the gross amount of each kind and grade of grain received during that week, together with the amount of dockage taken by such agent upon the grain so received. He shall also enter, in a book prepared for that purpose, a record of all shipments of grain made by him, stating plainly therein the date of each shipment, the car number and initial, and the point of destination."

Every elevator man who conducts his business in a business-like manner keeps his books so he can determine these facts readily. If the purpose of the Minnesota laws is to retard and discourage the elevator business, they give promise of proving a success. The populists are not broad enough to see the other businesses of the state, so the grain trade receives all the attention and regulation. The fairness of forcing a country elevator man to conduct a public elevator and then prescribing how he shall keep his accounts will impress every man having any sense of justice as decidedly ridiculous. The state may have power to require railroad companies to provide freight depots for bulk grain and to regulate the operation of such freight depots, but after it permits the companies to lease ground condemned for railroad purposes to private parties for private purposes, it is not fair to the lessee for the state to step in and regulate his use of the ground leased. The rapidity with which the state adds to its petty regulations, however, is encouragement for

the elevator men. The increase of arbitrary and unreasonable regulations will prove a potent influence in hastening the organization of the elevator men in the cause of justice and reform.

GRAIN INSPECTION AT CHICAGO.

[From an address by Edwin J. Noble, Chief Grain Inspector at Chicago, at the annual meeting of the Grain Dealers' National Association.]

Since coming to Des Moines and meeting with many members of the Grain Dealers' National Association, I find that a very erroneous impression prevails as to the manner in which the office of Chief Grain Inspector of Chicago is conducted and our system of inspecting grain. I ask your indulgence for a few minutes that I may explain to you our system of inspection and satisfy you, if possible, that all parties, whether shippers or receivers of grain, are treated impartially by our inspectors.

In the first place, it is charged that the inspection in Chicago is in the interest or for the benefit of the receivers and elevators handling grain in that city. To disabuse your minds of this false impression permit me to explain to you our system of grading grain. Our inspectors, known as track inspectors, are men who have been engaged in the grain business for from ten to twenty-five years. They have learned that as a trade and know but little else. We have not on the force a man addicted to the use of liquor. We are exceedingly particular in the selection of men, and any man on the inspection force, if known to be a drinking man, would be dismissed at once. These inspectors, with their helpers, go to their respective railroad yards early in the morning and inspect all cars of grain as indicated by the railroad company, the shippers' and receivers' names being unknown to the inspector. When he has finished his day's work his book is at once returned to the office with a detailed memorandum of the grades of grain contained in the different cars indicated by the numbers on said cars. When he has turned that book into the office it is then beyond his reach or control, and he could not, if he so desired, come into the office and change the grade of any car of his inspection. The only way that a grade could be changed after leaving the inspectors' hands is through a reinspection by our supervising inspector or changed by order of the appeals committee, to whom all shippers or receivers have a right to take their grievance for any grain graded unsatisfactorily to them. Does anyone suppose that a man, who has spent years in learning a trade, as these inspectors have, and receiving a salary of \$150 per month during the entire year, could be influenced by a few dollars from any person to change the grading of grain or to misgrade grain? His grading is not final; the receiver or shipper can ask for reinspection, and if the grading be sustained could then take it before the appeals committee. Any person who desires to have grain graded for his benefit and to the detriment of others would be obliged not only to fix the inspector, but our supervising inspector and the appeals committee as well. This, I presume, no man would claim possible; the benefit to be received would be small and the misgrading would jeopardize the positions of the track inspector, supervising inspectors and appeals committee, any or all of whom could be removed at once.

It is to be expected that a difference of opinion will often arise with shippers of grain as to the manner in which their grain is being graded, and I would suggest as a precautionary measure that the members of your association in consigning grain to Chicago would indicate by letter to the receiver his idea of the grade of that grain, and if it fails to come up to that grade that he ask for reinspection; or, if necessary, take it before the appeals committee. This gives us an opportunity to correct any possible mistakes that may occur before the grain passes beyond our control. Oftentimes we receive corn which the shipper feels should grade No. 2, but we are obliged to grade it No. 3 on account of a percentage of decayed or molded grains being mixed in it. If shippers would be particular when taking corn from the crib to the sheller, watch for and remove all ears that have become damaged by undue exposure to

rain, corn would, in many cases, grade better. Care should also be taken to have the cars clean before the grain is loaded into them, as well as to notice that the roof is tight enough to prevent rain from damaging the grain in transit.

The records of our office are open to the public, and any member of your Association is invited to call at any time at the office, examine our system of keeping our records and satisfy himself that the office is being thoroughly and honestly conducted for the protection of all. We keep no record in the office of the shipper and receiver, and know the grain only by the grade, car numbers and line over which it was received.

I have with me our supervising inspector, Mr. William Smillie, who has been connected with the office since the state took charge of the inspection of grain, in 1871. His reputation for integrity and honesty has never been questioned by any of the grain men in the city, all of whom have had personal acquaintance and dealings with him for many years. If there are any questions you desire to ask Mr. Smillie pertaining to the grades of grain or any samples you wish to submit to him while in this city, he will cheerfully give you any information you desire and the reasons for grading grain as he does.

As to the past administration of the Chicago grain office I have nothing to say. I am here, however, to

assume the responsibility for the proper conducting of the office and the grading of grain during the term of office, and if we fail to conduct the office in an honest, honorable, upright manner, I will assume the responsibility and not lay it to others.

I shall be pleased to hear from any member of this Association by letter in reference to any shipments they may make to Chicago. His correspondence will be promptly attended to, and we will undertake to give him a fair, impartial grading of all grain. I believe it would be greatly to the benefit of the grain shippers, if they would spend two or three days in Chicago, go out to the yards where the inspection is being done, and in that way acquaint themselves with our system of inspecting grain. Any courtesy that we can extend shall be done cheerfully, as we want to establish a more friendly feeling between shippers and receivers, as well as with the Chicago Grain Inspection Department. There is no reason why any misunderstanding should exist or any feeling of dissatisfaction be expressed by shippers of grain to the Chicago market. So far as is in my power I want to remove any prejudice that may exist and to assure you that fair, honest treatment will be accorded to all who have occasion to transact business through our department.

Much complaint is made in reference to the weighing of grain in the city of Chicago. This is done entirely outside of my department, and I have nothing whatever to do with the weighing of grain that arrives in the city of Chicago.

The first car of new rye appeared on the Chicago market July 17. It was from Illinois, graded No. 2 and sold at 36½ cents. Last year the first car arrived July 2, graded No. 2 and sold at 30 cents.

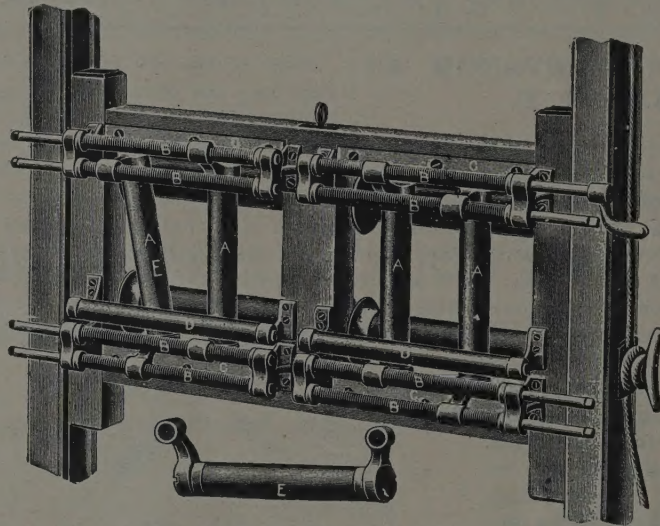
LADD'S SHOVEL LINE GUIDER.

A shovel line guider has been patented by C. T. Ladd of Buffalo, which is designed to give the operator perfect control of the lines. The ends of the iron rollers A are made independently adjustable by the two upper and four lower screws B, which cause the longitudinal movement of each and enables the operator to lead the line to any position.

The guider is well made and will last a long time. When a roller does wear out it can easily be removed and a new one substituted. It is claimed to save from 25 to 40 per cent. in power, wear of ropes and repairs.

REVIVAL OF FLAX GROWING.

The London Foreign and Colonial Importer says: "Flax enters so largely into numerous manufactures imported by the buyer abroad that the announcement of the establishment of factories in Suffolk and Cambridgeshire for dealing with the material on a commercial basis is one of some interest to our readers. The English Fibres Industries (Limited) is the name of the new company that has set itself the task of offering a stimulus to farmers at home growing flax on a large scale. The price



LADD'S SHOVEL LINE GUIDER.

offered by the new company, with which some growers are already coöperating, is £4 a ton for the straw with the seed on, as harvested, and, as a fair average crop in this form is 2½ tons per acre, the return of £9 an acre may be anticipated. It is further proposed that hemp should be grown in England, as it was in the old times to a small extent. For this crop, as harvested, the offer is £3 10s. a ton, and three tons an acre would be a low average, while the expense of growing is certainly not greater than that of producing flax. One well-known farmer produced 4½ tons an acre last season, when 1,500 acres of flax and hemp were grown for the company. The reasons given for expecting the new venture to succeed where previous undertakings have failed are that the appliances for preparing the fibers have been greatly improved, while the manufacture will be carried to a more advanced stage than that of scutching, and by-products hitherto wasted will be utilized. About 8,000 acres of flax and hemp are being grown this season for the two factories, and if the result is satisfactory other works will be established in different parts of the country."

The first new timothy seed of the season arrived at Chicago August 2. It was quite pure and of good color, but some of it considerably hulled, and some was not well cleaned. One car sold at \$2.75. Last year the first car arrived July 31.

The busy season of the grain shippers is on in good earnest. Shippers are more careful than they used to be, and if they will be still more particular in loading their cars and seeing that the doors are properly secured they will avert shrinkages and save money.

INSECTS INJURIOUS TO STORED GRAIN.

BY PROF. W. G. JOHNSON, COLLEGE PARK, MD.

This is the time of the year when great care should be taken with wheat as it is being placed in store. It is liable to serious injury from two principal enemies; the grain weevils and the grain moths. All of these are cosmopolitan and have been introduced into the United States. It is very common to find most grain dealers applying the term "weevil" to every insect found in their grain; but the true grain weevils are distinguished from the other beetles sometimes found in grain, by their long snouts. There are two species, one is known as the "granary weevil" and the other the "rice weevil." They look alike in general appearance and have similar habits. They are shown in the illustrations. The eggs are laid in the grain and the larvæ or worms feed within the kernels. The adult beetle also feeds upon the grain, and very often does more damage than the larvæ, as it feeds from grain to grain, cutting the kernels, making them appear as if they had been cracked.

The "granary weevil" has no wings and is therefore incapable of flying. It is transported from place to place in grains. The rice weevil, on the other hand, has well-developed wings, but very rarely uses them. It is possible that by the constant disuse of these organs it will lose them altogether in time, as has the granary weevil. If care is taken with bins, warehouses, elevators, etc., there need be no injury by these beetles. Once destroyed, the premises can be kept free from them by a little care. If they gain a foothold the place should be thoroughly fumigated with carbon bisulphide, as indicated below.

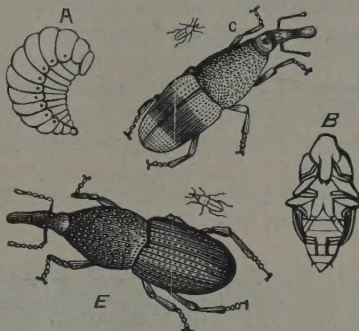
Of the moths that annoy the grain dealer, the little creature known as the Angoumois grain moth is, perhaps, the most important. It has been conspicuous as a grain destroyer for over a hundred and fifty years. It is known in this country as the "stock fly," "fly weevil," "white fly," etc. It is of the greatest importance in the Southern states, as it is a far more serious pest there than farther north. From the fact that it attacks the grain both in the field and in store it is regarded as a more destructive insect than the weevils. It infests all cereals, and grain will often lose 40 per cent. in weight in six months, to say nothing of the loss of farinaceous matter.

The adult or parent insect is a small grayish brown moth, with a wing expanse of about half an inch. The wings are delicately fringed, as shown in the illustration. As intimated above the moth deposits her eggs in the standing grain or in the bin. The eggs hatch into small worms, which perforate the grain and eat out the interior, leaving nothing except the hull. Wheat and oats usually afford accommodation for only one larvæ, while corn will furnish food for two or more. The insect passes the winter in the larval stage; but in warm bins and in the South it is possible that there are from four to eight generations annually.

To combat this insect successfully it is necessary to keep granaries and bins perfectly clean. Buyers of grain can never tell when they are getting material that is free from these pests. The wheat or corn may contain thousands of eggs and larvæ without being noticed by the producer. It is usually after the purchaser has had the grain in store for some time before he is aware of anything wrong. Where large quantities of grain are in store and it is suspected that weevils or moths are present, it should be thoroughly fumigated. The cost of material and the expense of applying it is so small there is no excuse for serious loss to stored grain by these pests.

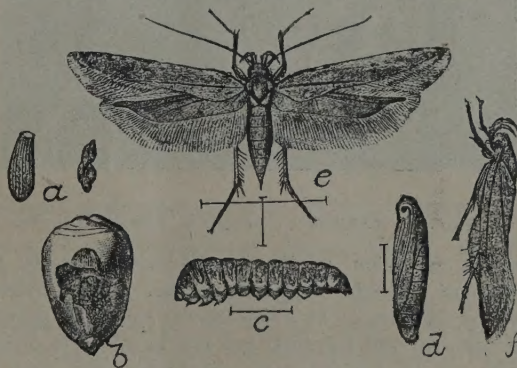
Many grain dealers hesitate about using carbon bisulphide for fear of fire or injury to the grain. So far as fire is concerned, I have never heard of an instance where fire was caused by the use of this material. The chemical can be used for twenty-four hours at the rate of one pound for every one hundred bushels of wheat, corn, barley or rye in store without injury to vitality. Cottonseeds, peas, beans, buckwheat, oats and cowpeas will stand a much

more severe treatment without injuring their germinating power. It is always well, however, to use carbon bisulphide with caution whether it is used in the elevator or bin. One pound to every one hundred bushels of grain is all that is necessary for the destruction of insects if properly applied. It is best to place the material in shallow dishes or pans upon the grain, then close these bins tightly for at least twenty-four hours. Many dealers make a mistake in not using enough of the substance. It is an easy matter to calculate the number of bushels in any inclosure, and then it is very easy to estimate how many pounds of carbon bisulphide should be applied. If empty bins, rooms or buildings are to be fumigated one pound of bisulphide should be used for every 1,000 cubic feet of air space. In my



GRAIN WEEVILS.—A and B, larva and pupa; C, Rice Weevil (*Calandra oryza*); D, Granary or Black Weevil (*Calandra granaria*).

experience I have known some millers and grain dealers to use from a pound and a half to two pounds carbon bisulphide to a hundred bushels of grain, or the same amount in every 1,000 cubic feet of air space. It is not very often that such a heroic treatment would be necessary, and I doubt the advisability of using so much even in extreme cases. It has been shown by experiment that one pound for every hundred bushels of grain and every 1,000 cubic feet of air space is sufficient, and when I hear of a miller or dealer using more, I am reminded of the dandy who argued that "if one pound of poison would kill the weevils dead, two pounds would kill them deader." The illustration of the grain moth used herewith is from Chittenden, in Farmers' Bul-



ANGOUMOIS GRAIN MOTH (*Sitotroga cerealella*): a, eggs; b, larva at work; c, larva, side view; d, pupa; e, moth; f, same, side view. (From Chittenden in Farmers' Bull., No. 45 U. S. Dept. Agr.)

letin, No. 45, U. S. Department of Agriculture. The other illustration is from an old drawing, the source of which I have been unable to ascertain.

The Interstate Commerce Commission, July 16, in an opinion by Commissioner Prouty, announced its decision in the matter of alleged unlawful rates and practices in the transportation of grain and grain products by the Santa Fe and other railway companies. Shipments of grain were carried to Kansas City, Mo., from points west thereof at local rates, and quantities of grain were afterward reshipped and rebilled from Kansas City to Chicago or other destination at the balance of the established through rate from the original point of shipment to Chicago or other ultimate destination, instead of the higher local rate in force from Kansas City to such destination. The Commissioner holds that such shipment and reshipment do not constitute a through shipment from the point of origin to the point of final destination, and grain so shipped and reshipped was not entitled to the benefit of the through rate in force.

VALUE OF WEATHER AND CROP REPORTS.

[A paper read at the annual meeting of the Grain Dealers' National Association at Des Moines, Ia., by J. R. Sage, state crop reporter for Iowa and director of weather service.]

This is an age of statistics. In these matter-of-fact days the dry and apparently uninteresting figures relating to production and consumption, the acreage and yield of crops, or the visible supply and probable demand, are important factors in the commercial world. By these prices rise or fall, questions of profit and loss are determined, and fortunes are made or destroyed. The most successful business men of this utilitarian age are those who are best able to solve the problems involved in these columns and tables of figures, and thereby correctly forecast the future supply and demand.

All civilized states and nations establish bureaus and agencies for the compilation of statistics of population and of production in all lines of industry. In former times these statistical details were of special interest to scientists and students of economics, but now they are matters of vital interest to all classes of business men. Farmers, bankers, merchants, as well as grain dealers and distributors of products, carefully note the figures that indicate increase or decrease in the volume of production.

The most beneficent form of paternalism in our government is the service rendered by the department of agriculture, through the branches known as the weather bureau and division of statistics. By these agencies the people collectively do for themselves those things that cannot be so well done by individual enterprise. Among all progressive and intelligent people there is recognition of the practical value of the work thereby performed. The theory and aim is to give to the public the best practical results of scientific investigation, and the most reliable figures as to production.

This crop service has been established in answer to an eager public demand for reliable facts and figures relative to the prospective yield of crops during the growing season, and the total output of the soil after the harvest. Producers and consumers alike are interested in the answer to the question, "What will the harvest be?" It is essential that the figures shall be accepted as reliable, and to this end they must needs come through impartial hands. The government, representing, as it does, all classes and interests, is generally recognized as the safest and most trustworthy agency to perform this important service for the benefit of all the people.

Without doubt, however, the gambling operators and plungers on the Board of Trade would gladly dispense with this branch of the public service. They have no special use for reliable statistics and estimates—that is, if the figures are given to all classes impartially. If the cold facts are to be given out they would like some advance tips and pointers. They would like some exclusive information, whereby they may take advantage of those who are not possessed of it. And I think that much of the severe criticism of the government crop reports and estimates comes from the gambling operators whose interests for the time are hurt thereby. Their acceptance of even the most truthful report depends upon whether they happen to be long or short. And the same men who vigorously denounced the report last month as wholly untrustworthy are this month ardent supporters of the official figures because they are now on that side of the market.

But I am glad to believe that the great body of legitimate grain dealers of the country are friendly to the government service. Their business is legitimate, honorable and helpful in our complex commercial system, and their interests are not antagonistic to the interests of producers and consumers. I feel assured that they are favorable to this service, and will gladly aid in its improvement.

And it must be admitted that improvement is possible. Like all things human, it is still imperfect. With the power of the government behind it, and almost unlimited means at its command, this service has not yet attained the full measure of its usefulness. This may be admitted without question-

ing its high degree of utility. We should all take hold to aid in its betterment.

There are two essentials of a thoroughly good and serviceable crop report, viz., accuracy and timeliness. It should be fairly correct in its data, and prompt in its issue. Absolute accuracy is not as yet attainable, but it is possible to secure a very close approximation to the truth as to the acreage of staple crops. The condition at various stages of the growing season may be estimated with a fair measure of correctness.

My experience in this line of work convinces me that the most difficult problem to solve is that relating to the actual acreage in crops, and to keep track of the variations in acreage from year to year. Here is where both the state and national statisticians have scored their greatest failures. In the school of experience we should learn to correct them. And in my judgment there is but one practicable way to secure fairly reliable figures, and that is by a state census of crop acreage made by township assessors in the discharge of their official duties.

In this state, under our present law, such a census is taken in the odd-numbered years, when the assessors list real estate for taxation. The additional expense is exceedingly small, and the returns may be tabulated in season to give the complete acreage of the state in the June or July crop report. In all the leading agricultural states some provision is made for a crop census every year, or every other year. It appears to me that by a system of co-operation of state and national officials the division of statistics might revise the crop acreage figures and correct some evident errors. Secretary Morton, in his year book for 1895, expressed his views as to the defects and drawbacks of the statistical division, especially in relation to acreage of crops. He said in substance that no satisfactorily accurate statistical work can be accomplished for agriculture and commerce by this department until provision has been made for taking an annual agricultural census. To this he adds: "Men of experience in cereal and cotton trades claim that if the acreage be accurately ascertained as to each staple product, and that acreage published in the month of June each year, and additionally the climate conditions in each locality be also officially promulgated each day or week or month during the growing season, more accurate approximations of crops can be reached than by any other method."

That is a sensible and practical view of the matter. Under the system heretofore in vogue in the national division of statistics the figures of the preceding United States census served as the basis of estimates of crop acreage from year to year. It is evident that it must be difficult to keep track of the increase or decrease of acreage for a whole decade after the census returns are published. We certainly need a census annually, or at least biennially, to keep an accurate account of the area of the staple crops.

In the several states of the Union there is ample machinery for doing this work in a trustworthy manner, and at a trifling expense. And, as previously stated, the leading agricultural states have been doing this work for some years, while the department of agriculture has been following the old system of guessing on the increase or decrease between the census years.

What we need is a thorough reconstruction, and a practical system of co-operation of state and national bureaus. In union we may attain accuracy as well as strength. The federal relation and bond of union implies that the several states and the national government should co-operate in all practicable lines to promote the general welfare.

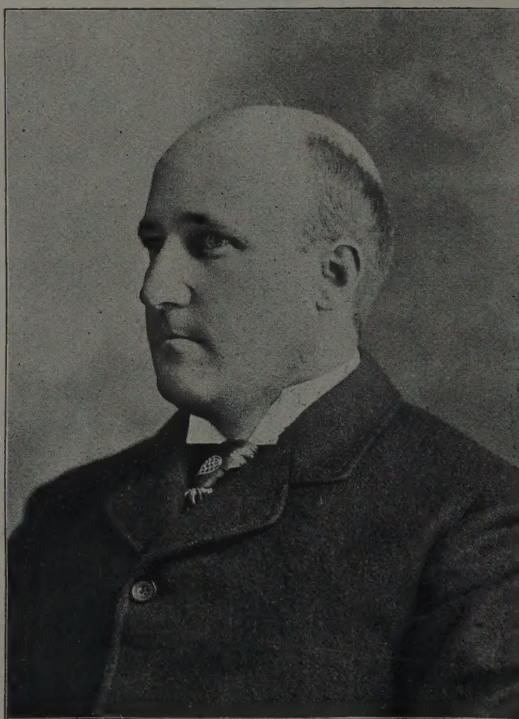
Heretofore there has been no real co-operation of state and national bureaus in the collection of crop statistics. They have worked on different lines, and sometimes at cross purposes. The effect of this divergence has been to discredit both the state and national reports. Let us get together, unify our work, and so command a vastly greater measure of public confidence.

And then also, in my judgment, the crop reports could be made more serviceable to the public by early and more frequent issues. Promptness, timeliness, or up-to-dateness should be the rule of action,

especially during the critical stages of crop growth, or of the harvest. The public want information early and often. The service could be improved vastly by cutting some of the red tape, and abolishing all routine that hinders promptness. It needs an injection of some of the vim and energy that are exhibited by rustling newspaper men. The government might properly and profitably undertake to get a "scoop" on some of the rustlers of the private crop bureaus. The slow-going clerks of the division, clad in the civil service armor, might be reluctant to quicken their paces in times when speed is required, but I think a way might be found to jog them by a little thunder and lightning of the weather bureau.

The regular monthly reports should be supplemented by the issue of semi-monthly or even weekly statements, whenever changes are noted to justify estimates of decline or marked improvement in the crop conditions. The statistical division should be in close touch with the fields, and information should go, if need be, on the wings of lightning, and not by freight train.

My experience and observation lead to the conclusion that this crop service could be greatly im-



PRESIDENT WARREN T. MCCRAY, KENTLAND, IND.

proved by union, or direct co-operation, of the division of statistics and the weather bureau. They belong together as fit yokefellows, and they should be made to pull together and not in opposite directions. In that union there would be more than a twofold increase in value to the public.

A half dozen years ago the weather service and the crop division belonged to two different departments of the government; but by the law of the eternal fitness of things the weather bureau was brought into the Department of Agriculture, where its efficiency has been largely increased. By that same law of fitness the crop division should become an annex of the weather bureau.

For it is clearly evident that the weather is a prime factor in crop production. No man can become a crop expert unless he is a close observer of weather conditions, with some practical knowledge of meteorological science. He may be expert in handling dry statistics and percentages, while utterly deficient in knowledge of the conditions under which crops are grown and brought to maturity.

Experience has proven that the most reliable crop reporters are the trained voluntary observers of the weather bureau, who make records of meteorological conditions. One such intelligent observer in a county, in close contact with the farms, would do better service than a score of men who take no note of weather conditions.

The shrewd grain dealers and speculators under-

stand this relation of weather and crops, and they are diligent students of the daily weather maps and tables. They pay vastly more attention to the daily maps and weekly bulletins than to the monthly estimates and averages of the statistician.

I am glad to state that under the administration of our progressive secretary of agriculture these two branches of his department are likely to be brought into relations of harmony; and the scope of the weekly crop bulletins issued by the weather bureau has been enlarged. There will be none of the old-time jealousy and restrictive orders under the rule of Secretary Wilson.

But one step further needs to be taken, and that should bring the two bureaus into one household. The weekly climate and crop bulletins should be supplementary to the monthly reports of the statistician; and when occasion requires the bulletins should contain revisions of estimates of crop percentages, based on reports from the fields and marked changes in weather conditions.

But I need not extend this discussion. My sole aim has been to contribute my word and use my influence toward the betterment of the service which has been established for the benefit of all the people, and especially those who are connected with agriculture and commerce. It is your service, gentlemen, and I invite you to aid in elevating it to a still higher plane of usefulness.

WARREN T. MCCRAY.

At the annual meeting of the Grain Dealers' National Association one of Indiana's representative grain merchants was elected to the presidency for the ensuing year. Many complimentary remarks have been passed about the good fortune of the Association in securing a man so well known, and one whose remarkable success in the grain business foreshadows similar success in association work.

The new president, Warren T. McCray, of McCray & Morrison of Kentland, Ind., was born in Newton County, Feb. 4, 1865. He received a good education and graduated with honor from the Kentland public school. After graduating he entered his father's bank and remained there until he was 21 years of age, when he formed a partnership with Mr. W. J. Kirkpatrick in the grocery business, remaining in this trade for about four years. In the meantime a great fire had swept the A. J. Kent warehouses out of existence and Mr. McCray's keen business eye was not long in discovering that this would make a splendid location for a new warehouse. Mr. R. G. Risser was taken into the deal and Elevator "A" was erected. This elevator had a capacity of 100,000 bushels and was equipped with all the modern improvements. Mr. McCray sold his interest in the store and was left free to follow the grain business uninterruptedly.

During Mr. McCray's partnership with Mr. Risser they built a large house at Raub, Ind., and one at Effner, Ill. In 1893 Mr. Risser disposed of his interest in the property to Mr. James L. Morrison of Kentland, Ind., and the style of the firm became McCray & Morrison. Since that time they have built a large transfer elevator at Kentland with storage capacity of 100,000 bushels and a transfer capacity of 50 cars per day. They have also built houses at Earl Park and Beaver City, Ind. The Earl Park house is one of the most complete in the state of Indiana, having cost about \$13,000, and contains all modern apparatus to facilitate the handling of grain. In connection with Mr. James Washburn they purchased the Hartley Elevator at Remington. They are located in a very rich agricultural district, and buy a great amount of oats throughout Illinois and the West. A charter member of the Grain Dealers' National Association, Mr. McCray has the interests of the Association at heart and will work earnestly to increase its membership and extend its influence.

The first car of new oats arrived at Chicago July 19. It came from Central Illinois, graded No Grade and sold at 18 cents. Last year the first arrival of new oats was on July 9. They graded No. 3 White and No. 2 White.

COST OF GROWING CORN IN NEBRASKA.

The Standard Cattle Company at Ames, Nebr., sends out a leaflet devoted to statistics of its corn crop for the season of 1896, which are not without interest wherever corn is grown. The area planted was 2,462 acres, on which the yield was 169,031 bushels, being 68.6 bushels per acre. The cost of labor was \$6,717.33; for hauling manure, \$1,844.98; plowing, \$2,114.45; rent of land, \$1,616; breaking prairie, \$795.94; harvesting 170,000 bushels, \$6,800; making the total cost of the corn \$19,888.70. In addition 6,365 tons of stover was saved, being 2½ tons per acre, at a cost of \$9,320.70, or \$1.46 per ton. The hauling of the cut fodder and stover to the cattle cost \$1,500, making the total cost of growing and feeding the crop \$30,709.40. The corn is figured to have cost \$8.08 per acre, 11.7 cents per bushel. These data will convey an idea of the cost of growing and feeding corn on a large scale, under Nebraska conditions, when an exact account of the crop is kept.

FLAXSEED INSPECTION RULES.

The following regulations for the grading and inspection of flaxseed were adopted by the Board of Directors of the Board of Trade of the City of Chicago, at its regular meeting held July 20, 1897:

Weight per measured bushel.—The weight per measured bushel designated for each grade shall be that of commercially pure seed.

No. 1 Northwestern.—Flaxseed to grade No. 1 Northwestern shall be mature, sound, dry and sweet. It shall be Northern grown, or have the usual characteristics thereof. The maximum quantity of field, stack, storage or other damaged seed intermixed shall not exceed eight per cent. The minimum weight shall be fifty-one (51) pounds to the measured bushel.

No. 1.—No. 1 flaxseed shall be sound, Southern-grown flaxseed, and that possessing the inherent qualities thereof, and seed that is dry and free from mustiness and carrying intermixed not more than 20 per cent. of immature or field, stack, storage or other damaged flaxseed, and weighing not less than fifty (50) pounds to the measured bushel.

Rejected.—All damp, musty and smoky flaxseed and that carrying intermixed immature or field, stack, storage or other damaged flaxseed in excess of 20 per cent. and weighing not less than forty-six and one-half (46½) pounds, shall be graded "Rejected."

No Grade.—Flaxseed that is wet, moldy, warm or in a heating condition, or is intermixed with burnt seed, or is in anywise unfit for temporary storage, or weighs less than forty-six and one-half (46½) pounds, shall be graded "No Grade."

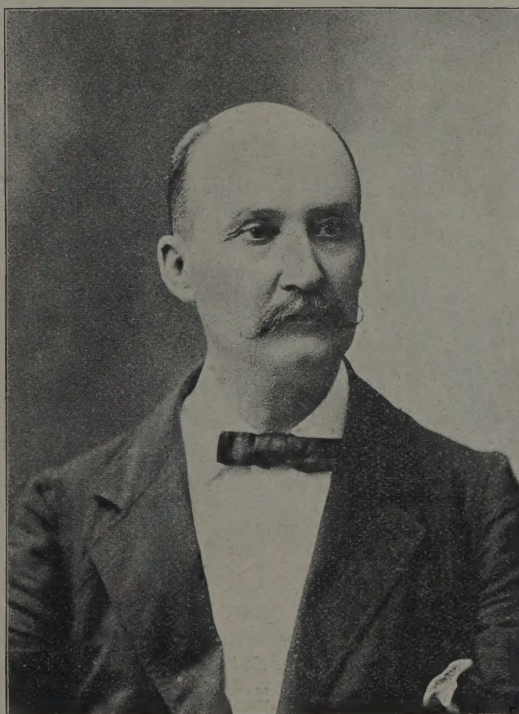
OATS ON THE CINCINNATI MARKET.

There is a peculiar situation among the grain men on 'Change that threatens to cause a hitch in the market in the disposition of oats. It seems that there have lately come to the local market a considerable quantity of new oats. The receivers have been asking 17½ cents for No. 3 Mixed, but the buyers, such as the Union Grain and Hay Company, Early & Daniels, the J. N. Woolscroft Company and other concerns have bid but 17 cents. The demand for the oats comes principally from the buyers, who have held out for 17 cents, and as a consequence the amount of No. 3 Mixed Oats has been piling up right along, until now there is a great lot of the grade on the market. The receivers are very much set on getting their price of 17½ cents, but the absolute refusal of the larger buyers, who get the grain and reship it to the South or East, to pay any more than the 17-cent price has made the receivers believe that their action is the result of a concerted movement to break down the market on the product. This is denied by the buyers, who say that they are not ready for buying the oats, and that the demand as yet would not warrant it. The receivers, however, find themselves in a very pe-

culiar position, with the oats piling up on them by consignment, with no relief from the usual source of reselling and reshipment. Accordingly a new mode is being tried by them, which is an effort to get in the Southern market themselves and sell direct to the people that have been accustomed to purchasing through the firms who are now not buying at all.—Enquirer, Cincinnati, Ohio.

J. M. SEWELL.

In selecting J. M. Sewell of Hastings, Nebr., as Second Vice-President of the Grain Dealers' National Association, the Association secured a dealer who has had many years of experience in the business, and that, too, in a state where much has been done to advance the interests of those engaged in the grain trade by combined effort. Nebraska has had local, district and state associations of grain dealers, and many reforms have been instituted as a result of it. At present Mr. Sewell is treasurer of the Nebraska Grain Buyers' Association, the strongest trade organization the dealers of the state have ever had



SECOND VICE-PRESIDENT J. M. SEWELL, HASTINGS, NEBR.

despite the unreasonable legislation of the past winter.

Mr. Sewell has been connected with the grain trade of that section for 21 years. He was born at Niagara, Canada, in 1848, and in 1870 went to Lincoln, Nebr., from Stratford, Ont. Six years later he started in business at Juniata, which was then the county seat of Adams County, and he has been in business there ever since. He is president of the J. M. Sewell Co., which has headquarters at Hastings, where Mr. Sewell lives. The company operates a number of elevators at points west of Hastings.

Over 20,000,000 packages of vegetable, flower and field seed were distributed by the Department of Agriculture during the last spring. This distribution gave to each member of Congress 40,000 packages of seed at a total cost of \$130,000. Over 1,000,000 of these packages were flower seed, and nearly 300,000 field seed, the balance being a great variety of vegetables. This is the largest distribution of seed ever attempted by the Department of Agriculture, and it is said that seedsmen all over the country are complaining that they do not make sales to farmers and others because they are getting all the seed they want free from the Department of Agriculture. Several new varieties of plows, harrows and hired men will be distributed as soon as the bucolic Congressmen can get another appropriation for the agricultural department.

RESTRICTING USE OF BAGS BY FARMERS.

Grain dealers who have been forced to continue the lending of bags to farmers will be pleased with the effort being made this year to stop the practice. A product of competition in the early days of the country's grain trade when the margin of profit was large and the losses nil, this old custom has survived and come to be a great burden upon the country grain dealer. Some have stopped it entirely, others have joined with their competitors and agreed upon rules for the regulation of the loaning of sacks to farmers. The farmers have abused the practice so much that no grain dealer would continue it were he sure his competitors would stop. A number of Indiana dealers have stopped the loaning of bags, and dealers in other sections of the country are also likewise disposed. Two of the dealers of West Jefferson, Ohio, have recently published the following notice:

After hearing from a number of our patrons in regard to the matter of our furnishing sacks for hauling grain to market, we have decided we will furnish sacks this year to all patrons who desire it in accordance with the following rules:

1. Sacks must be returned within five days from the time they are taken out. Persons who keep sacks for a longer period will be charged one cent per day for each sack.

2. Persons returning sacks which are torn or otherwise damaged will be charged from two cents upward for the damage done them.

GALLAGHER & MURRAY,
SILVER & CHENOWETH.

In view of the fact that some farmers have used one dealer's sacks to haul grain to another buyer we would suggest the amendment of rule so that the first sentence shall read, "Sacks must be returned full of grain within five days from the time they are taken out."

Some dealers have induced many farmers to provide their own sacks by announcing that they would discontinue the practice of lending and offering their stock of bags for sale.

The case which has been pending in the Federal court between Sibson & Kerr against C. J. Kershaw and P. H. Kershaw, of the West Coast Grain Company, has been decided by Judge Hanford rendering a verdict in favor of plaintiff of \$69.19.—News, Tacoma, Wash.

The Marsden Co. of Rockford, Ill., may establish a factory at Fairbury for manufacturing cattle feed and other products from cornstalks. H. H. Mitchell, representative of the company, is negotiating for a site at that place. The same company may erect factories at other points.

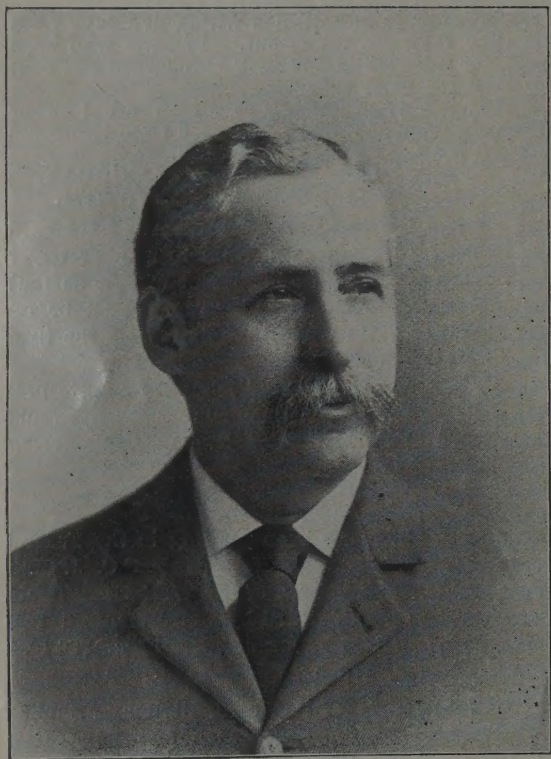
The Wabash Elevator Co. of Toledo, Ohio, has announced elevating and storage charges as follows: On sound grain, the elevating charge will be ½ cent a bushel, and for each succeeding 10 days, or any part thereof, a storage of ¼ cent a bushel. Winter storage on all grain except No. 4 Corn (exclusive of elevating charges), from August 1, 1897, to May 5, 1898, inclusive, 3 cents a bushel; September 1, 2¼ cents; October, 2½ cents; November, 2½ cents; December, 2 cents.

Farmers always live up to their contracts to sell their crops when the market goes down, but when it goes up after they have sold, they often deliver it to some other dealer at the ruling market price. The Pantagraph of Bloomington, Ill., says: W. D. Castle & Co. have begun suit against E. F. Murray for \$892. The suit is brought for the use of the Middle Division Elevator Co., which buys grain extensively along the line of the Illinois Central between this city and Kankakee. The bill sets up that the defendant sold to the complainants 4,500 bushels of corn to be delivered on or before April 15 at 17 cents a bushel. He did not deliver the grain and complainants are informed that he is about to dispose of the corn to other parties, which is alleged to be a violation of contract. The market value of the grain is now 22 cents a bushel, and Castle & Co. sue for the difference in the price and damages.

ANNUAL MEETING OF THE NATIONAL HAY ASSOCIATION.

The fourth annual meeting of the National Hay Association was held at Pittsburg, Pa., August 10, 11 and 12. In the number present and the interest displayed by the members, the meeting surpassed every former convention of the association. Over 300 receivers and shippers were present. In the absence of President William Hopps of Baltimore, the chair was occupied by Vice-President Peter Keil of Pittsburg. Mr. Keil called the convention to order at 10 o'clock. After expressing his satisfaction at seeing so large a number present he introduced Mayor H. P. Ford of Pittsburg, who delivered an address of welcome. Mayor Ford was followed by John Bindley, president of the Chamber of Commerce of Pittsburg. Mr. Bindley spoke of the magnitude of the interests of the hay industry and of the important place which Pittsburg occupied in the marketing of this product.

Secretary P. W. Pitt of Baltimore announced the appointment of the Committee on Nominations as follows: Willis Bullock, chairman; G. W. C. John-



PRESIDENT E. L. ROGERS, PHILADELPHIA, PA.

ston, Arthur Clum, J. W. Fisher, F. W. Rundell, J. F. Clendenin and H. V. Burns.

The reading of the minutes of the last meeting was dispensed with. The report of the secretary and treasurer was read as follows:

To the officers and members of the National Hay Association:

The membership of the Association shows a marked increase over last year. The financial condition of the Association is as follows:

RECEIPTS.

Balance from last year.....	\$134.80
Annual dues.....	369.05
Sales of emblems.....	5.00

Total.....\$508.85

EXPENDITURES.

Willis Bullock.....	\$162.30
Typewriting and clerical work.....	35.50
Forbes Lithograph Co.....	26.63
Fleet, McGinley & Co.....	101.74
Munder Bros.....	78.85
Stationery.....	.35
Expressage and freight.....	7.03
Copy books.....	1.90
Postage.....	39.42
Error in crediting dues.....	3.00
Ex. Special R. R. agent.....	17.00

Total.....\$473.72
Balance on hand.....35.13

Respectfully submitted.

P. W. PITT, Secretary and Treasurer.

The report of the Committee on Transportation was read by Secretary Pitt.

Willis Bullock, chairman of the Committee on Legislative Action, submitted the following report, which was approved:

Mr. President and Gentlemen:—This report will take but a little of your time, as the preliminary steps to the late action were taken at St. Louis last September, when the following resolution was passed:

"Whereas, It being the object of the National Hay Association to promote the interests of the hay trade in all its branches, and notwithstanding the short crop of 1895 it has been fully demonstrated that there was an abundant supply produced in the states to supply their markets, and it being further shown that the importation of hay during the past two years has had a disturbing effect in our markets by creating a surplus and a depression of values to the detriment of trade; therefore be it

"Resolved, That it becomes the duty of the National Hay Association to use its influence toward the protection of American hay, by requesting Congress to modify the duty so as to protect the American grower against the invasion of foreign product."

At the convening of the present Congress, this resolution, together with other articles bearing on the subject which were in hand, were placed in the hands of the Hon. D. F. Wilber, member of Congress from the twenty-first New York District, who immediately laid the same before the Ways and Means Committee, with the result that the duty on hay was placed at \$4 per ton, which upon reaching the Senate Committee was reduced to \$3.50 per ton of 2,240 pounds. On June 12, 1897, I wrote Mr. Wilber in regard to it, of which the following is a copy:

"Hon. D. F. Wilber, Washington, D. C.

"Dear Sir:—It is reported that the Senate Committee have changed the schedule on hay from \$4 in the House bill to \$3.50 per gross ton of 2,240 pounds, bringing the duty on the net ton down to \$3.12. I wish to say that it is the opinion of the great majority that \$4 per ton is small enough. The lesson that the farming community and the people engaged in the hay industry have been studying for the past two years relative to the matter has been a bitter one, and I can assure you that they are not in sympathy with the present rate, neither will they be satisfied with the proposed rate of the Senate Committee, and as Chairman of the Legislative Committee, representing the National Hay Association, I ask that you investigate, and if reports as above are correct, would recommend that the rate on hay be restored to that of the House bill."

Immediate action was taken by Mr. Wilber and the Senate amendment withdrawn, leaving the House rate of \$4 per ton on hay, and \$1.50 per ton on straw, in place of the ad valorem duty of 25 per cent. on the latter and \$2 per ton on the former. This covers the action taken by this committee since our last meeting. I respectfully submit the same for your consideration.

WILLIS BULLOCK, Chairman.

It was moved and seconded that the convention adjourn to meet at 8 o'clock in the evening.

TUESDAY EVENING SESSION.

The convention was called to order at 8:30 p. m. by Vice-President Peter Keil. Very great interest was shown at this meeting and a number of topics were discussed. The subjects included the dishonest practices of receivers and shippers, inspection of hay, and grades.

J. J. McCaffrey moved that all members of the Association, both receivers and shippers, use the trademark or emblem of the association on their letterheads and envelopes. The motion was carried.

The convention adjourned to meet at 9 o'clock August 11.

WEDNESDAY'S SESSION.

The second day's session was called to order at 9:30 a. m. by Vice-President Peter Keil.

H. Lee Early, chairman of the Auditing Committee, read the following report:

To Peter Keil, Vice-President of National Hay Association:

Your committee appointed to audit the books of the secretary and treasurer begs leave to report that it has made the examination of the books and finds them in exact accordance with the statement submitted by the secretary, with net balance in the treasury of \$35.13.

H. LEE EARLY,
E. L. ROGERS,
D. W. CLIFTON, Com.

It was moved and seconded that the report be accepted and placed on file.

A. E. Clutter moved that the Transportation Committee be instructed to request all railroads, in constructing their new equipments, such as cars, etc., to make them of maximum capacity. The motion was carried.

Willis Bullock, chairman of the Committee on

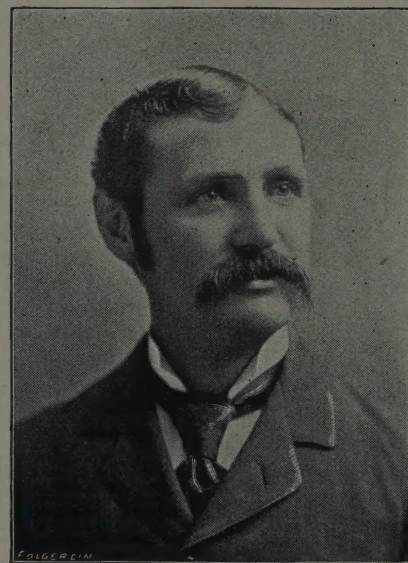
Nominations, reported the following nominations: For president, E. L. Rogers, Philadelphia; first vice-president, Henry V. Burns, Buffalo; second vice-president, A. E. Clutter, Lima, Ohio; secretary and treasurer, Frank F. Collins, Cincinnati, Ohio. Directors, James W. Sale, Bluffton, Ind.; George S. Bridge, Chicago, Ill.; D. W. Clifton, St. Louis, Mo.; Fred W. Rundell, Toledo, Ohio; Edward Dillenback, New York City; Jas. T. Clendenin, Baltimore, Md.; Cyrus H. Bates, Boston, Mass. It was moved and seconded that the report be accepted. Carried.

Geo. S. Blakeslee of Chicago moved that a committee be appointed to escort the new president to the chair. The presiding officer appointed Mr. Griffith, Mr. Blakeslee and Capt. Ellwood.

Mr. Rogers made a short address, thanking the members for the honor conferred upon him. He spoke of the importance of securing new members and said, that although the Association had accomplished and was still doing very much good, it would be still more successful if it could double its membership. He hoped to see the membership increased to 500 during his term of office.

Mr. Blakeslee moved that the Vice-President be given a vote of thanks for the able manner in which he had presided over the meeting. Carried.

Edward Dillenback moved that the next meeting of the Association be held at Buffalo. H. V. Burns



SECRETARY AND TREASURER F. F. COLLINS, CINCINNATI, O.

moved as an amendment that the selection of the place for the next meeting be left in the hands of the Executive Committee. The amendment was carried.

H. Lee Early moved that all the members present from large Eastern points be instructed to request the boards of trade in their cities to adopt the grades of the National Association. The motion was carried.

Mr. Early proposed the following amendment to the by-laws:

Resolved, That Article 18 of the by-laws be amended to the effect that a standing committee of five be appointed, to be known as a committee of arbitration and investigation, whose duty it shall be to investigate all complaints made by any member of this corporation against any shipper or receiver; and if the accused be found guilty of any unbusinesslike or unmercantile conduct, their finding to be made known to each member of this organization.

G. S. Blakeslee moved that the Legislative Committee and Committee on Transportation be given a vote of thanks for their excellent work in behalf of the Association. Carried.

On motion by D. W. Clifton the meeting adjourned to convene August 12 at 9 o'clock.

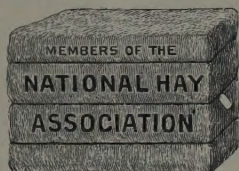
THURSDAY'S SESSION.

The third day's session was called to order at 10 o'clock by Vice-President H. V. Burns. The question of demurrage was taken up in a general discussion. It was the unanimous opinion of all the members that all railroads allowed too little time for loading and unloading cars.

Jas. McCaffrey moved that the Committee on Transportation be instructed to endeavor to induce

the railroads to extend the time for loading and unloading cars, before charging demurrage, to three days. Mr. Collins moved to amend the motion by making the time limit four instead of three days. The amendment was carried.

Geo. S. Bridge moved that the members of the National Hay Association give a vote of thanks to the members of the Pittsburgh Corn and Flour Exchange for the magnificent entertainment which it had been accorded. A vote of thanks was also extended to the retiring secretary, P. W. Pitt, to Mayor Ford, to the Carnegie Steel Works, the Consolidated Steel and Wire Co.'s Works, and to James Francis Burke of the Pittsburgh bar.



CONVENTION NOTES.

Massachusetts was represented by Cyrus H. Bates, Boston, and L. S. Lord, Boston.

The following were present from Missouri: D. W. Clifton, J. W. Dye, Geo. J. Schulte, Fred Diebel and P. J. J. O'Connor of St. Louis.

Maryland was represented by P. W. Pitt, Harry C. Jones, H. W. Anderson, James T. Clendenin, E. E. Kirwan, A. T. Kuhl, all of Baltimore.

The Hay Trade Journal was represented by Willis Bullock and W. B. Abeling and the "American Elevator and Grain Trade" by John E. Bacon.

New Jersey was represented by P. H. Florence of Newark; West Virginia by C. D. Kyle of Short Creek, and Quebec, Ont., by John Hanigan of Malmaison.

Illinois was represented by G. S. Blakeslee, Chicago; Frank D. Voris, Neoga; A. D. Campbell, Peoria; W. R. Breckenridge, Kankakee; P. C. Southwick and H. A. Adams, Sandwich; F. E. Bray, C. A. Davies, H. H. Fisher, Geo. S. Bridge and W. R. Mumford, Chicago.

Indiana was represented by James W. Sale, Bluffton; E. A. Lee, Rushville; S. Burkett, North Manchester; A. Wasmuth, Roanoke; C. F. Davidson, Bluffton; J. C. Houck, Bingen; E. E. Carr, Chalmers; C. A. Augspurger, Berne; W. B. Russell, La Gro; J. W. Henry, Avilla.

The following were among those present from Michigan: Johnson Dafeo, Crosswell; John Holden, Gale; H. K. Balderson, Portland; J. A. Heath, Lenox; A. Bradshaw, Saginaw; A. S. Sholes, North Branch; J. Wahl, Monroe; D. C. McLaren, Chelsea; E. J. Curtis, Linden; Wm. Pratt, Linden; Frank J. Booth, Attica.

On the afternoon of August 12, the last day of the convention, the members of the Association took a special train at 1:30 p. m. at the B. & O. R. R. station for a joint excursion over the Pennsylvania lines, P. & L. E. R. R. and the Pittsburgh & Western R. R. They visited all the terminal railroad yards, their connections and connecting bridges and the H. J. Heinz Co.'s preserving works.

New York was represented by H. V. Burns, Buffalo; W. Affleck, New York; N. A. Fuller, New York; W. D. Jones and Chas. E. Pollard, Buffalo; A. J. Kinne, Ovid; H. A. Hogmire, Avon; F. O. Peck, New York; John E. Murray, New York; Fred J. Stroh, New York; F. Williams, New York; R. S. McCarthy, Brooklyn; Wm. C. Bloomingdale, Brooklyn; Edward Dillenback, New York; J. V. Marion, Buffalo; Fred G. Langner, Buffalo; A. F. Stanton, Utica; A. L. Clum, Buffalo; C. O. Tinkham, Akron; J. F. Taggart, Brooklyn.

The following were present from Pennsylvania: E. L. Rogers, Philadelphia; D. G. Stewart, William Henry, J. W. Smith, Peter Keil, Caleb McCune, Charles Herb, J. A. McCracken, S. B. Floyd, John J. McCaffrey, W. S. Floyd and Philip Geidel Jr., Pittsburgh; J. S. Calhoun, Indiana; S. Merrill, Meadville; Otto A. Buettano, McKees Rocks; James M. Norris, Wilkesbarre; E. B. Stone, Nyalusing; J. A.

Lamb, Beaver Center; L. F. Miller, Philadelphia; G. W. C. Johnston, R. S. McCoyne, J. A. Moore, H. G. Morgan, J. C. Houck, and W. G. Miller, Pittsburgh; Walton Bros., Philadelphia; Drury & Grubham, Beaver Center; J. B. Robinson, Watson Run; S. Merrill, Meadville.

Among those present from Ohio were: Frank F. Collins, Cincinnati; F. W. Rundell, Toledo; L. N. Grosvenor, Claridon; Langwell Bros., Dixon; P. O. McCully, Carrollton; H. Lee Early, Cincinnati; W. A. Barnes, Brink Haven; A. B. Hoobler, Mineral Point; A. E. Clutter, Lima; D. S. Miller, Upper Sandusky; J. C. Bright, McComb; L. L. Cass, Weston; Joseph Pettit, Sterling; W. J. McClure, Alliance; E. C. Wagner, Columbus; S. P. Hartzler, Wellersville; Justin Brewer, Ada; A. L. Clapp, Lodi; J. A. Hooper, Dixon; L. W. Dewey, Blanchester; W. O. Crow, Wilmot; E. P. Clay, Canton; J. S. Adams, Utica; D. W. Wallace, Hunt; C. S. Shaw, St. Johns; L. W. Hull, Upper Sandusky; E. C. Linton, Rockford; E. R. Horst, Smithville; Wilson Lowe, Silver Creek; D. H. Ramey, Granville; J. A. Runser, Ottawa; D. W. Flemming, Golden Corners; J. P. Eversole, North Berne; J. T. Reese, Alexandria; Jacob Welz, Wharton; H. E. Wright, Hardin; W. J. Salter, Cleveland; John Faughbonen, Fremont; Whitcomb & Root, Cincinnati; Henry Heile, Cincinnati; J. H. Hermish, Cincinnati; Campbell & Pierce, Lewisburg; S. R. Mitchell, Midland;



H. M. HASTINGS' DUMP AND LOADER AT COOKSVILLE, ILL.

E. C. Linton, Wilmington; H. M. Strauss Jr., Cleveland; E. A. Grubbs, Cincinnati.

The afternoon of August 11 was given over to an excursion on the Allegheny and Monongahela rivers. At 12 o'clock the members of the Association were escorted by the Second Brigade Band of Pittsburgh to the Steamer Elizabeth. The steamer was decorated for the occasion with bunting and two large bales of hay hung high above the prow. The first point of interest at which the steamer stopped was Davis Island Dam. Here the entire party left the boat and were photographed. After leaving the dam luncheon was served on the boat. After doing full justice to the good things that had been provided, short speeches were listened to from E. L. Rogers of Philadelphia, James Francis Burke of the Pittsburgh bar, Cyrus W. Bates of Boston, A. E. Clutter of Lima, Ohio, J. W. Sale of Bluffton, Ind., Edward Dillenback of New York City and John J. McCaffrey of Pittsburgh. By the time the speech-making was concluded the boat had arrived at the Carnegie Steel Co.'s Works. The entire party left the boat and were shown over the plant. From here the steamer proceeded to Rankin and the works of the Consolidated Steel and Wire Co. were visited. From this place the members of the Association again took the boat and returned to the city.

On the afternoon of August 10 twelve carriages and eight wagonettes drove up to the Monongahela Hotel to take the members of the National Hay Association for a drive through two of Pittsburgh's handsomest parks. The route taken by the party led out through Forbes Street, entering Schenley Park, adjoining the Carnegie Library. The route was past the Bigelow Monument, the conservatory and through the northern end of the park. Here the

hay dealers were subjected to an unexpected experience. Rain commenced falling. Knowing full well the damage it was capable of doing to the product in which the members dealt, the rain seemed to think it necessary to try its art on the dealers themselves. It was productive of some inconvenience and considerable merriment, however, and soon giving up its task the drive was continued. From Forbes Street the carriages turned into Fifth Avenue. Handsome stone cottages, many of them with facade half overgrown with ivy, here lined the roadway. Proceeding from Fifth Avenue through North Highland Avenue the party soon entered into Highland Park. The carriages stopped on the high bluffs overlooking the Allegheny River directly opposite the towns of Aspinwall and Sharpsburg. Refreshments were served here, and after the members had rested from the ride and finished viewing the many natural beauties of the place, including the two large city reservoirs which are located here, they were driven back to the city.

AN ILLINOIS DUMP AND LOADER.

In the vigorous search which is ever being prosecuted in hope of devising more efficient and economical methods of handling grain than are now utilized by the progressive elevator men of the country, some queer products are brought into existence.

Success seldom crowns the efforts of those who always strive to get something for nothing, and the grain shipper who seeks to obtain a grain handling plant for next to nothing generally gets a cheap plant that is likely to cost more than a good one in the long run.

The plant illustrated herewith has been erected by Henry M. Hastings at Cooksville, Ill. It consists of an unprotected driveway, supported by frail framework. The dump, like the driveway, is open to the elements, and rain, snow, hail and ice can interfere with the handling of grain and damage much that is handled. The grain is dumped into a large bin or sink, then elevated by an inclined belt carrier to a point a little above the top of a freight car and spouted into the car. Power is furnished by a steam thrashing engine. As the grain falls just inside the car door it must be shoveled to the ends as when it is thrown in with a shovel from a wagon. If the sink was large enough to hold a carload its use might obviate the necessity of delaying the car until the grain was hauled from the farms. As constructed the grain handling plant seems to have no advantage save that of reducing the amount of shoveling necessary to get the grain from the wagon to the car and the time required to transfer it. Inasmuch as grain may be spoiled and the plant kept in idleness by storms it cannot be considered a labor-saving plant, and the cost of handling grain will be much greater than with shovels.

The Great Northern Elevator Co. gave notice that on August 4 the oats clipping and flax cleaning machines would be removed from the elevator, and that after that date only cleaned flax would be taken for storage, and no oat clipping done.—Commercial Record, Duluth.

COMMUNICATED

[We invite correspondence from everyone in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

FAVOR ORGANIZATION.

Editor American Elevator and Grain Trade:—We notice an editorial article in the July number of the "American Elevator and Grain Trade" concerning the organization of elevator men in Indiana. We favor the movement and will attend a meeting at any time. Hoping you will succeed in forming this organization, we are

Very truly yours,

THE UNITED ELEVATOR CO.,
T. A. Morrison, Manager.

Kokomo, Ind.

WEIGHT TEST IN GRADING AT CHICAGO.

Editor American Elevator and Grain Trade:—In reply to inquiry as to the weights of grain we require in grading, I desire to say that under our rules No. 3 Spring Wheat must weigh not less than 53 pounds to the bushel; No. 3 Winter Wheat not less than 54 pounds to the bushel. In all other grades of grain the weight is not considered in establishing the grade. The color, cleanliness and quality govern our grade.

Yours respectfully,

E. J. NOBLE, Chief Inspector.

ILLINOIS ASSOCIATION'S LIST OF REGULAR DEALERS.

Editor American Elevator and Grain Trade:—The list of regular grain dealers ordered by the Illinois Grain Dealers' Association to be compiled has been published and is being distributed. The following changes should be made in the list:

Insert R. A. Mueller & Co. for Irish & Clark, Deland.

Insert Houck & Gregg for Frank Todt, Raymond.

Insert H. W. Rogers for Wood & Topliff Grain Co., Gibson City.

Insert C. A. Burks for Stackhouse & Burks, Be-ment.

Insert Carlisle & Dooley for J. R. Carlisle, Downs.

Insert Marshall & Stoltz for W. A. Marshall, Deer Creek.

A. D. Derrough of Sidney was reported without a star. He is a member of the Association, having joined at the meeting of March 10, 1897.

Since our last report to you, our membership has increased to the number of about fifty. The applications have not been voted upon, hence I do not feel warranted in sending them to you until I receive a full ballot from the directory.

Yours very truly,

B. S. TYLER, Secy.

Decatur, Ill.

OHIO'S TESTER LAW.

Editor American Elevator and Grain Trade:—There has been no formal action by the Cincinnati Chamber of Commerce regarding the use of the grain tester, as provided for by the Ohio law requiring a half-bushel capacity in transaction with the original producer. The question of joining in the movement to secure a legal opinion as to the constitutionality of the act was considered in March, 1894, and it was deemed inexpedient then to act in such direction, as our dealers are not especially concerned in the matter. There is at this time a proposition before our Board to contribute to the cost of carrying the case through the courts, under the indictment which has been issued against John W. Yeazell of New Moorefield, Ohio. This has not been disposed of yet.

The opinion appears to prevail among the grain interests on 'Change that our Chamber is not especially interested in this question, as the law does not apply to transactions between dealers, nor in any cases other than where wheat is purchased or received from the original producer. Our Exchange acted in an effort to keep the bill from being passed, but was unsuccessful in this. The law is manifestly an absurd one, and can accomplish no

good for the producer. It tends to complicate matters, and to obstruct more or less freedom of business between the producer and the interior dealer.

Truly yours,

CHARLES B. MURRAY,
Superintendent Chamber of Commerce.
Cincinnati, Ohio.

SWINGING BOARD WAS USED IN '78.

Editor American Elevator and Grain Trade:—The patent on our dump did not cover the swinging board, and I do not believe any of the patents owned by Jas. M. Harper of Peoria did. I remember along in 1878 or 1879 of my father speaking of an elevator built somewhere in Illinois which had a dump under which were two sinks, a swinging board being used to direct grain into either sink. He remarked at the time that it made one dump take the place of two or more. He did not consider that there was anything in it, as the same principle had been used for years below bins.

Yours truly,

R. H. McGRATH.
La Fayette, Ind.

RELIABLE EVIDENCE PROVING USE OF DEFLECTING BOARD PRIOR TO NOV. 3, 1883.

Editor American Elevator and Grain Trade:—I notice communications in the June number of the "American Elevator and Grain Trade" on the length of time the deflecting board has been used in dumps with two sinks under them, the board, or so-called deflector, being used to turn the grain into either of the sinks. I have been using a dump of

Monticello, Ill., June 21, 1897.

This is to certify that we constructed a dump for unloading grain in the elevator built by C. R. Smythe & Co., in the year 1876. Said dump was constructed with two bins under it, with door on pivot to throw either way to direct grain into either bin, keeping the grain separated, said elevator being located in Monticello, Ill., and built by us.

[Seal.]

State of Illinois, }
Piatt County. }

J. C. Harrington and Wm. Mosgrove subscribed their names to the above instrument and it was duly sworn to before me this 22d day of June, 1897.

J. C. HARRINGTON.
WM. MOSGROVE.

R. I. TATMAN,
Notary Public.

Monticello, Ill., Aug. 2, 1897.

This is to certify that I worked in the elevator built by C. R. Smythe & Co. in Monticello, Ill., in 1876; that the dump used in said elevator had two bins under it with deflecting board to direct grain into either bin, and that said principle has been used in dumps on same lot ever since.

GIDEON CHENOWETH.

this kind for 21 years. It was put in an elevator built in 1876. The plan of this elevator was made by the Chase Elevator Co. of Chicago.

I present herewith a sworn statement of the two men who made the dump, also of one of my men who has operated the elevator since it was built.

Yours truly,

E. G. KNIGHT & SON.
Monticello, Ill.

USED DEFLECTING BOARD IN 1875.

Editor American Elevator and Grain Trade:—In response to your call for information regarding the use of the swinging deflecting board prior to Nov. 13, 1883, will say, such a board, covered with iron, was put under the driveway of an elevator this company erected for the Topeka Mill & Elevator Company, at Topeka, Kan., in the summer of 1882. The elevator is still standing.

This company built an elevator for Cannoll & Mayer at Frankfort, Ill., in 1875, and put a swinging deflecting board covered with iron under the driveway to divert the grain as it fell from the wagons to either of two sinks under the dump. This elevator has been burned.

The Chase Elevator Company started to build elevators in 1873 and put swinging deflecting boards under at least nine-tenths of the dumps constructed for country elevators.

Jas. M. Harper of Peoria bought a number of patents on dumps, including one issued Oct. 13, 1868, for what was known as the Swickard Dump, and, after collecting royalties from a number, he sued R. M. McGrath & Co., of Lafayette, Ind. McGrath & Co. fought the case to a finish and knocked out Harper's patents.

D. A. Wells of Sandwich, Ill., was an early in-

ventor of wagon dumps, and W. G. Adams of Sandwich manufactured this dump.

Robt. Livingston of Oak Park, Ill., and T. R. Thomson of Peoria, Ill., put in many dumps for this company and equipped most of them with swinging deflecting boards.

Any patent covering such a board under wagon dump could be knocked out easily if taken into the courts. It is not necessary for anyone to pay royalty for use of such a board.

CHASE ELEVATOR COMPANY.

Chicago, Ill.

LENDING GRAIN BAGS TO FARMERS.

Editor American Elevator and Grain Trade:—Nowadays, when so many of the abuses in the grain trade are being talked of, and remedies are being sought for many a time-honored evil, it is just as well for every grain dealer to remember that association work will not do everything. Individual economy must always be exercised if success is to be obtained—that is, if we are going to make money. This preachment is given advisedly, and it comes from an experience of lending grain sacks to farmers.

This is a more or less general practice in my section of the country, and those who are inclined to smile at the idea simply show their ignorance of the power of custom, and the effect of one man's action over those of another, which takes place in competition. At first sight one might think that there was really no harm in furnishing bags to farmers in which they may deliver their wheat. There is even the apparent advantage that the recipients of the bags will deliver their grain crop in toto to the lender of the bags. It was doubtless with this argument that the practice began. It shows a surprising ignorance of the nature of the farmer, and it's a delusion and a snare.

This is how the system works in reality: The farmer goes to the country elevator man who lends bags, and asks for the number he wants for the grain he is about to deliver. For the elevator man this is just like finding money; it's a palpable hold on the farmer. The bags are counted out, and the farmer departs. This would be a hold on anyone—except the farmer, who, as we know, has little sense of business honor when it costs him the shade of a profit. The elevator man waits; he keeps on waiting. Meanwhile the farmer is on his way to town with a load of wheat, when he meets the rumor that some other grain buyer is paying perhaps one-half cent more per bushel than the one who furnished the bags. There go the farmer's grain and the elevator man's bags. The elevator man waits patiently; very often he keeps on waiting without ever seeing his bags or the borrower again. Perhaps he will get them back in a month or two, more or less the worse for wear.

Any grain dealer who has made a practice of lending grain bags to farmers can testify to the truth of this statement. It is a common experience. Many dealers still follow this useless and costly custom. And after all, if grain dealers are so foolish, can farmers be blamed if they abuse the confidence reposed in them? In my opinion the blame is all on the other side. But many grain dealers, too, do not know what it is to lend bags. Many sell the bags to farmers and allow them so much for all bags returned in good condition. This is a good way out of the lending business. At any rate I say this: A grain buyer can do nothing worse than to inaugurate this system, and nothing better than to abandon it.

HOOSIER.

Railroad lines in the Southeastern territory recently announced a cut of 3 cents in corn, flour and grain products from Memphis, Tenn. The new rates were to go into effect August 20, but it was stated later that they would be withdrawn.

Steamer grain inspection rates in Washington have been reduced 50 per cent. The new rates for inspection of grain brought to market on steamers are: On all large shipments, 75 cents on each 20 tons; shipments between 15 and 20 tons, 75 cents; shipments less than 15 tons, five cents. Fees to be remitted hereafter will be guided by the foregoing.

THE INCREASED VALUE OF OATS.

Mr. F. W. Burlington of Atlantic has sent the Register of Des Moines, Iowa, the following estimate of the increased weight and present value of this year's oats compared with the weight and value of last year's oats:

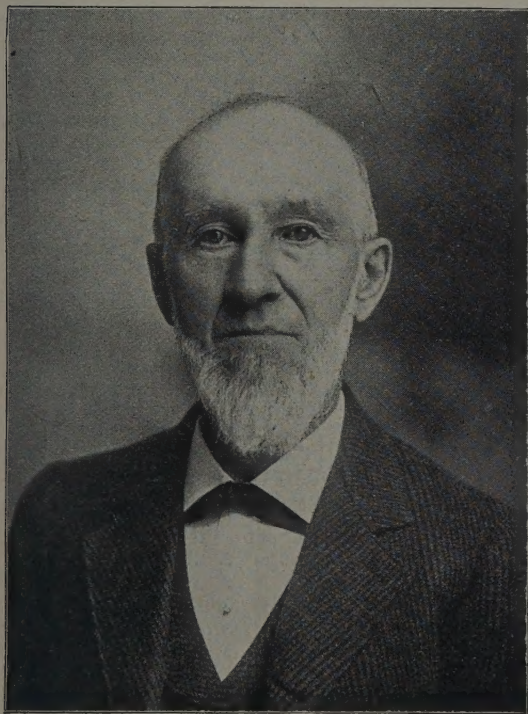
Atlantic, Iowa, July 22, 1897.—R. P. Clarkson: Below I give a tabulated estimate of the returns from a wagonload of last year's and of this year's oats. It must be remembered that thrashing is done for 2 cents per bushel, reckoning a wagonload at 50 bushels, no matter what they weigh:

1896 Oats.	1897 Oats.
One wagonload (full) 35 bu., 7c per bu.....\$2.45	One wagonload (full) 60 bu., 13c per bu.....\$7.80
Thrashing.....1.00	Thrashing.....1.00
Total.....\$1.45	Total.....\$6.80
Net return to owner of oats after paying thrashers 2c per bu. (wagon load).	Net return to owner of oats, after paying thrashers.

F. W. BURLINGTON.

SMUT IN WHEAT.

The seventh annual report of the North Dakota Agricultural Experiment Station contains the following brief report on smut in wheat by Chemist E. F. Ladd, B. S.:



PRESIDENT J. S. SMITH, IOWA FALLS, IA.

The experiments indicated that when smut once finds its way into the berry, the entire kernel is destroyed and no starch is formed.

After the berry has been developed in the wheat head, the smut does not seem to enter that berry. At least we have not found such a case in fully a thousand examinations.

If all the smut balls and adhering particles of smut are removed from the wheat, as good flour can be produced as from the same grade of wheat free from smut.

To remove the smut requires much additional expense at the mill, as well as special facilities.

The berries of wheat in a field affected with smut will not average as large and well developed as the berries from a field under like conditions but free from smut. That is, the berries in a field of wheat free from smut averaged 5.16 per cent. heavier than the berries in a field containing about 15 per cent. of smut.

As the berries in each case were selected smut free, it is suggested that the difference in development may be due to the presence of smut in the stalk and not in the berry, thus preventing normal growth.

Flour containing but a very small per cent. of smut is much injured in quality for bread making, and in some way the gluten seems to be affected.

Therefore, the loss in wheat is not only in the

grain actually smutted, but in a smaller average development of berries for the whole field, resulting in a diminished yield and lower grade.

RICE IMPORTS AND EXPORTS.

The last report of the Bureau of Statistics gives the imports of rice for June as 18,757,752 pounds, valued at \$325,692, against 6,725,059 pounds, valued at \$107,367, imported in June, 1896; and imports during the year ending June 30 amounted to 133,939,790 pounds, valued at \$2,555,960, against 78,190,334 pounds, valued at \$1,274,574, imported in the year ending June 30, 1896. Rice flour, etc., imported in June, amounted to 4,647,891 pounds, valued at \$79,019, against 4,521,189 pounds, valued at \$59,919, imported in June, 1896; imports for the year ending June 30, being 63,875,754 pounds, valued at \$961,200, against 911,005 pounds, valued at \$63,875,754, for the year ending June 30, 1896.

Of imported rice we exported 1,332,355 pounds in June, against 1,256,458 pounds in June, 1896; and the exports for the year ending June were 11,604,442 pounds, valued at \$193,174, against 13,619,466 pounds, valued at \$205,982, exported in the year ending June 30, 1896.

FORM OF STORAGE TICKET FOR MINNESOTA COUNTRY ELEVATOR MEN.

The Minnesota Railroad and Warehouse Commission has issued a circular to country elevator men, calling attention to the following extract from Section 4 of the Country Elevator and Warehouse law:

"No receipt or certificate shall contain language in any wise limiting or modifying the liability of the party issuing the same as imposed by the laws of this state, and any such language if inserted shall be null and void."

The Board has adopted a form of receipt as required by law and announced that any other form is expressly prohibited. The form is as follows:

No. Elevator,
..... Minn. 189..
Received in store of
..... bushels No. Wheat,
which amount and same quality by grade will be
delivered to the person named herein, or to the
lawful owner thereof, or his order, as provided by
law, and payment of lawful charges.

The established maximum rates and charges for receiving grain, insuring, handling and storing same fifteen days and delivering is 2 cents per bushel.

Storage after the first fifteen days, one-half cent per bushel for each fifteen days or part thereof for the first three months; after the first three months, one-half cent per bushel for each thirty days or part thereof. If grain is cleaned at owner's request, one-half cent extra per bushel.

This grain is insured for benefit of the owner.

..... bu. lbs., gross.
..... bu. lbs., dockage. Owners or Lessees.
..... bu. lbs., net. By Agent.

A RECEIVER'S PLATFORM.

An enterprising Cincinnati grain commission firm has adopted the following as its platform and is determined to stand by it:

"We do not buy grain unless to fill contracts, as we cannot in justice to our patrons deliberately bring our own grain in direct competition with theirs. In case of any preference, where such can be shown, our patrons shall have it, as we own no grain to push in front of that intrusted to our care on consignment.

"We have in the past year devoted our exclusive attention to the interest of shippers, who in turn have shown their appreciation by their liberal consignments.

"There is no detail, however small, such as difference in weight, overcharge in freight (either in rate or weight) grading, tracing, etc., that is overlooked.

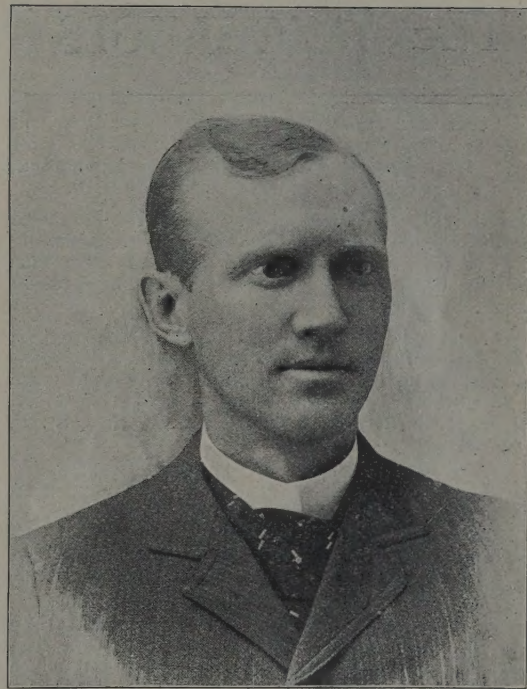
"We carefully guard the interests of shippers by promptly notifying the nearest one to a farmer shipper. We are members of the Illinois Grain

Dealers' Association, as well as our local organization, and rigidly adhere to their principles."

That is the kind of a commission firm regular grain shippers should delight in taking pains to encourage. It confines its energies to looking after the business interests of patrons, conducts a commission business only, and hence does not experience any conflict of duty to self with that due to customers.

THE NORTHWESTERN IOWA GRAIN DEALERS' ASSOCIATION.

The Hawkeye State has been a leader in the organization of grain dealers' associations and has had some very successful ones, and it is natural that the regular dealers of the state should come promptly to the support of any organized movement that promises to heal local differences and bring about much needed trade reforms. One of the latest organizations formed in that state is the Northwestern Iowa Grain Dealers' Association. This organization must not be confused with the Grain Shippers' Association of Northwestern Iowa,



SECRETARY FRANK C. HOWE, HAMPTON, IA.

which is a separate organization and has a different membership.

The President of the new Association is James Stevenson Smith of Iowa Falls. He was born at Dorchester, N. H., in 1832, educated in the common schools and at New Hampton Academy. When seventeen he was placed in a general store by his father as clerk, and after serving four years embarked in the same business for himself at Wentworth, N. H. He came West in October, 1855, locating at Iowa Falls, where he built the first store, carrying on business in it until 1868, when he went into the grain and live stock business, and has continued in it since. In October, 1858, he married Rhoda Whipple at Wentworth, N. H.

Secretary Frank C. Howe, who was born at Ripon, Wis., in 1858, has a steam elevator and feed mill at Hampton and deals in grain, seeds and live stock. Evidently he is a young man of much energy and business ability and will make a vigorous effort to insure the success of the organization.

The members of this Association met at Iowa Falls July 15 to effect permanent organization. The meeting was well attended and proved a success in every way. The constitution and by-laws are now being printed and will be ready soon for circulation.

Joseph G. Larrabee, grain and hay broker of Newark, N. J., disappeared July 6, and has not been heard from since that time.

QUERIES: AND: REPLIES

[Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.]

No. 1. Who Makes Farmer's Corn Sheller?

Can someone inform me who makes the Farmer's Corn Sheller? I want to buy one.—H. R. MUNKELT, Salem, Ind.

No. 2. How to Use Bisulphide of Carbon.

We have been using bisulphide of carbon in our elevator and mill to kill weevils. We were not successful in killing the insects, and would like to know the reason. We used 50 pounds of the bisulphide in our mill, setting it about in 160 different vessels. We did the same in the elevator without getting good results. Is it necessary to give each bug a bath in order to kill it? The stench was terrible and we do not see how bugs could live in it.—INDIANA. [The above query was sent to Mr. Edw. R. Taylor, who replied as follows: "In the treatment of the elevator the 'Fuma' should have been poured right into the wheat in the bins, and not set around in shallow dishes as in the mill. If this had been done it is very likely that all the weevils in the wheat would have been killed with 50 pounds of the liquid. But not enough was used in the mill to do any good. It takes a large amount of vapor to produce a death atmosphere in a large empty space."]

The EXCHANGES

The cost of membership in the Chicago Board of Trade is advancing along with the revival of business. Last month tickets of membership sold at \$670, on August 13 they were selling at \$785.

Membership to the Kansas City Board of Trade is limited to 200, and on account of the unusually bright outlook for business new members have been admitted until the limit is reached. The present price of memberships is \$75 to \$100.

The following elevators have been made regular by the Milwaukee Chamber of Commerce: Elevator B of Angus Smith Elevator Company, the Northwestern Marine elevators Nos. 1 and 2 of Charles Manegold Jr. & Co., Elevator "E" of the C., M. & St. P. R. R. Co.

The East St. Louis State Grain Inspection Department has established an office in the St. Louis Merchants' Exchange building, for the convenience of grain men and millers. The change from St. Louis to Illinois inspection in the East St. Louis district took place August 1. Arthur Hecker, of Summerfield, Ill., is chief inspector of the district.

A. E. Babcock, a broker of St. Louis, Mo., is engaged in legal contests with the Merchants' Exchange of that city, and is preparing to bring suit against it for violation of the interstate commerce and anti-trust laws, charging that it monopolizes the trade in grain, etc. Mr. Babcock is charged with bucket-shopping, which the Exchange does not propose to permit in its building.

The members of the Milwaukee Chamber of Commerce have unanimously adopted amendments to Rule 23, extending the benefits of the gratuity fund to the nephews and nieces of a deceased member, and empowering the trustees, in case of the death of a member without heirs, in their discretion to use the fund that would have been payable to his heirs, or a part thereof, in the payment of funeral expenses, or of expenses of the last sickness of such member.

Advertisements occasionally appear in newspapers published in other cities requesting speculators and investors to address certain locations in Chicago for advice as to proper firms with whom to place funds. This is part of the game usually adopted by "investment pools," and speculators and investors should avoid this proffered advice. It is on a "semi-black-mailing scheme," and no notice should be taken of these advertisements. If anyone is not perfectly satisfied with their correspondent a note to the secretary of the Chicago Board of Trade will set them aright.—Trade Bulletin, Chicago.

Three more Chicago elevators, besides those announced in this department last month, have been made regular by the Chicago Board of Trade. They are the Wabash, the Indiana and the Nebraska City elevators. In the case of the Nebraska City Elevator the warehouse committee had made a report adverse to such action. The committee thought this elevator had failed to comply in some respects with the rules of the board. Among other things it was urged that a cleaning house was in too close proximity to the elevator and that the railroad switches connecting these buildings with the main tracks were so arranged that cars intended for the cleaning house might accidentally be unloaded at the regular

elevator. The members of the committee adhered to the report, but they were overruled by the full directory.

President Langenberg, of the St. Louis Merchants' Exchange, recently appointed a committee to investigate as to the feasibility of abolishing the call board of the Exchange. The committee reported in favor of its continuance, on the ground that the majority of the members desired it. The fact remains, say those who favor its discontinuance, that the business of the call board has almost ceased, and that, as at Chicago, New York and other cities, it should be abolished.

FIRE HAZARD OF ELEVATOR HEADS.

In the construction of large terminal elevators of late years an earnest effort has been made to reduce the fire hazard, and so much has been accomplished as to effect a material reduction in the insurance rate. The country elevator men, and especially the owners of small elevators, have given little, if any, attention to the fire hazard and their houses have continued to burn with the usual regularity. No one has made a special study of the country elevator as a fire risk, hence no one has been in a position to point out the dangerous defects in construction.

A fire occurred in the elevator of Carr & Brown Co. at Hamilton, Ohio, recently and the loss was adjusted by M. A. Reynolds of Chicago, an adjuster of experience, who has made a specialty of mills and elevators. His report to the Millers' National

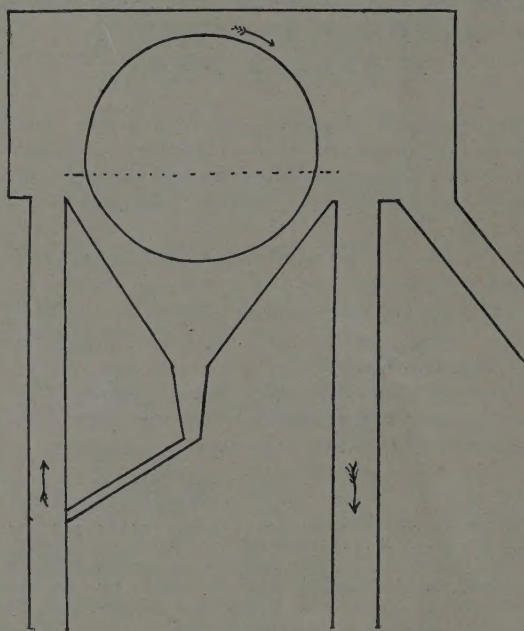


FIG. 1. ELEVATOR HEAD WHERE FIRE STARTED.

Insurance Company on the fire contains a valuable pointer for owners of elevators containing elevator heads constructed on the old plan. In his report he writes:

"This fire occurred at about 11:45 p. m. of August 5, 1897, and was first discovered by a son of Mr. Brown, who happened to be passing, and promptly turned in an alarm. A light from a window of the cupola of Elevator 'A' attracted his attention, and when the fire department arrived it was found that the entire inside of the cupola was on fire, and by exceeding good work the damage by fire was largely confined to that part of the building.

"The watchman had not been in that part of the building since about 8:30 o'clock, and when the fire was discovered he was in the engine room eating his midnight meal, as is customary for watchmen at about the time a fire is discovered.

"In the cupola was located the heads of two elevators and the usual spouting therefrom to conveyors and bins on the floor below. The elevators were 12-inch strap and had exceptionally large pulleys; they being 5 feet in diameter by 14-inch face, and were driven by an upright shaft with bevel iron gears. The elevators had the usual hopped heads, the outlet to which was spouted through the floor and into the side of the up leg, but the hopping was too flat, owing to the presence of the supporting timbers for the shaft and gears, and the spouting was contracted at the floor to about half the size of the opening at the hopper, which gave it a funnel shape and made it impossible to free itself if once clogged, and the absence of anything like a hand-hole in either the hopper or spout made it difficult to tell without a careful examination whether the dust was delivering itself or not.

"The cause of the fire was a mystery to all who had examined the wreck until I came. The spouting and hopping was not burned entirely away, and when I had satisfied myself that the fire did not start from a box or the gears or the belt, I removed

one side of the hopping and found it packed full of dust, which was so firmly pressed into the hopper that it required the use of an iron bar to dislodge it from the pulley. This dust and filth was blackened and charred to a depth of one-half to three-quarters of an inch by the friction of the pulley, and had been smouldering undoubtedly from the time the elevator stopped running at 6:30 until it was found to be on fire.

"At a point well up toward the down leg there must have been some slight defect in the head, or possibly a knot or pitchy place in the board (white pine) which offered less resistance to the heat, for at this point the fire had burned through the head and then followed up the side to the timbers above and then to the roof and whole interior of the cupola. It is more than likely that there had been no flow of dust from this hopper for six months; and for weeks the pulley no doubt ran with fully one-fourth of its circumference grinding against this accumulation until it finally got packed so hard that the friction was so great as to set the stuff on fire.

"I speak of this at great length, for it is so seldom we get an opportunity to see just how these fires do start that I regard it as a good thing for your inspectors to know about in detail, and because any elevator without a hand-hole to the hopper, so it can readily be examined, is likely to be found in exactly this condition unless in the hands of a very careful man; more careful than the average elevator attendant."

The dotted line, Fig. 1, shows how far up about the pulley the dust and pulverized grain had accumulated. It is a wonder the pulley turned at all. The friction caused by its turning and grinding the grain which fell upon the solid mass already packed in the head was such as to start another of those "mysterious fires," "cause unknown." The heat caused the board beside the pulley to shrink, a knot fell out, fresh air was admitted to the smouldering mass. The flames quickly came out the knot-hole. At the top of the charred mass and beside the mouth of the down leg and communicated to the cupola.

NEW GRADES AT CHICAGO.

At a meeting of the Board of Railroad and Warehouse Commissioners in Chicago August 6 it was decided to establish grades to be known as No. 4 White Spring Wheat, No. 4 Hard Winter Wheat, No. 4 Rye, No. 4 Oats and No. 4 White Oats, and to change the wording of the rules governing the grading of No. 3 Rye and No. 3 Oats.

These changes will take effect September 1. The Chicago rules, as amended, are as follows:

RULE 1.—WINTER WHEAT.

No. 1 White Winter Wheat—Shall be pure White Winter Wheat, or Red and White mixed; sound, plump and well cleaned.

No. 2 White Winter Wheat—Shall be White Winter Wheat, or Red and White mixed; sound and reasonably clean.

No. 3 White Winter Wheat—Shall include White Winter Wheat, or Red and White mixed, not clean and plump enough for No. 2, but weighing not less than fifty-four pounds to the measured bushel.

No. 4 White Winter Wheat—Shall include White Winter Wheat, damp, musty, or from any cause so badly damaged as to render it unfit for No. 3.

No. 1 Long Red Winter Wheat—Shall be pure Red Winter Wheat of the long-berried varieties; sound, plump and well cleaned.

No. 2 Long Red Winter Wheat—Shall be of the same varieties as No. 1, sound and reasonably clean.

Hard Winter Wheat—The grades of Nos. 1, 2, 3 and 4 Hard Winter Wheat shall correspond in all respects with the grades of Nos. 1, 2, 3 and 4 Red Winter Wheat, except that they shall be of the Turkish variety.

In case of mixture of Turkish Red Winter Wheat with Red Winter Wheat, it shall be graded according to the quality thereof and classed as Hard Winter Wheat.

No. 1 Red Winter Wheat—Shall be pure Red Winter Wheat of both light and dark colors, of the shorter-berried varieties; sound, plump and well cleaned.

No. 2 Red Winter Wheat—Shall be Red Winter Wheat of both light and dark colors; sound and reasonably clean.

No. 3 Red Winter Wheat—Shall include Red Winter Wheat not clean and plump enough for No. 2, but weighing not less than fifty-four pounds to the measured bushel.

No. 4 Red Winter Wheat—Shall include Red Winter Wheat, damp, musty, or from any cause so badly damaged as to render it unfit for No. 3.

In case of the mixture of Red and White Winter Wheat, it shall be graded according to the quality thereof and classed as White Winter Wheat.

No. 1 Colorado Wheat—Shall be sound, plump and well cleaned.

No. 2 Colorado Wheat—Shall be sound, reasonably clean, and of good milling quality.

No. 3 Colorado Wheat—Shall include Colorado Wheat, not clean and plump enough for No. 2, but

weighing not less than fifty-four pounds to the measured bushel.

RULE 2.—SPRING WHEAT.

No. 1 Northern Spring Wheat—Must be northern-grown Spring Wheat, sound and reasonably clean and of good milling quality, and must contain not less than 50 per cent. of the hard varieties of Spring Wheat.

No. 1 Spring Wheat—Shall be sound, plump and well cleaned.

No. 2 Spring Wheat—Shall be sound, reasonably clean, and of good milling quality.

No. 3 Spring Wheat—Shall include all inferior, shrunken or dirty Spring Wheat, weighing not less than fifty-three pounds to the measured bushel.

No. 4 Spring Wheat—Shall include Spring Wheat damp, musty, grown, badly bleached, or for any cause which renders it unfit for No. 3.

White Spring Wheat—The grades of Nos. 1, 2, 3 and 4 White Spring Wheat shall correspond with the grades of Nos. 1, 2, 3 and 4 Spring Wheat, except that they shall be of the white variety, or shall contain 5 per cent. or more, of such White Wheat.

Black Sea and Flinty Pffe Wheat—Shall in no case be inspected higher than No. 2, and Rice Wheat no higher than No. 4.

Frosted Wheat—Shall in no case be graded higher than No. 4, except that the grade of No. 3 may contain as much of said Frosted Wheat as it is customary to allow of wheat damaged in any other way.

RULE 2½.—MIXED WHEAT.

The grades of Nos. 2 and 3 Mixed Wheat shall be equal in quality to the grades of Nos. 2 and 3 Red Winter Wheat, except that they shall include mixtures of Spring and Winter Wheat.

RULE 3.—CORN.

No. 1 Yellow Corn—Shall be yellow, sound, dry, plump and well cleaned.

No. 2 Yellow Corn—Shall be three-fourths yellow, dry, reasonably clean, but not plump enough for No. 1.

No. 3 Yellow Corn—Shall be three-fourths yellow, reasonably dry and reasonably clean, but not sufficiently sound for No. 2.

No. 1 White Corn—Shall be sound, dry, plump and well cleaned.

No. 2 White Corn—Shall be seven-eighths white, dry, reasonably clean, but not plump enough for No. 1.

No. 3 White Corn—Shall be seven-eighths white, reasonably dry and reasonably clean, but not sufficiently sound for No. 2.

No. 1 Corn—Shall be Mixed Corn, of choice quality, sound, dry and well cleaned.

No. 2 Corn—Shall be Mixed Corn, dry, reasonably clean, but not good enough for No. 1.

No. 3 Corn—Shall be Mixed Corn, reasonably dry and reasonably clean, but not sufficiently sound for No. 2.

No. 4 Corn—Corn that is badly damaged, damp or very dirty, shall be graded no higher than No. 4.

Corn that is wet or in heating condition shall not be graded.

RULE 4.—OATS.

No. 1 White Oats—Shall be white, sound, clean and reasonably free from other grain.

No. 2 White Oats—Shall be seven-eighths white, sweet, reasonably clean and reasonably free from other grain.

No. 3 White Oats—Shall be seven-eighths white, but not sufficiently sound and clean for No. 2.

No. 4 White Oats—Shall be seven-eighths white, damp, badly damaged, musty, or for any other cause unfit for No. 3.

No. 1 White Clipped Oats—Shall be white, sound, clean, reasonably free from other grain, and shall weigh not less than thirty-six pounds to the measured bushel.

No. 2 White Clipped Oats—Shall be seven-eighths white, sweet, reasonably clean, reasonably free from other grain, and shall weigh not less than thirty-four pounds to the measured bushel.

No. 1 Oats—Shall be Mixed Oats, sound, clean and reasonably free from other grain.

No. 2 Oats—Shall be sweet, reasonably clean and reasonably free from other grain.

No. 3 Oats—Shall be Mixed Oats, not sufficiently sound and clean for No. 2.

No. 4 Oats—Shall be all Mixed Oats that are damp, badly damaged, musty, or for any other cause unfit for No. 3.

RULE 5.—RYE.

No. 1 Rye—Shall be sound, plump and well cleaned.

No. 2 Rye—Shall be sound, reasonably clean and reasonably free from other grain.

No. 3 Rye—Shall be reasonably sound, reasonably dry, free from must, and not good enough for No. 2.

No. 4 Rye—Shall be all rye, damp, musty, or for any other cause unfit for No. 3.

RULE 6.—BARLEY.

No. 1 Barley—Shall be sound, plump, bright, clean, and free from other grain.

No. 2 Barley—Shall be of healthy color, not sound enough and plump enough for No. 1, reasonably clean and reasonably free from other grain.

No. 3 Barley—Shall include slightly shrunken and otherwise slightly damaged barley, not good enough for No. 2.

No. 4 Barley—Shall include all barley fit for malting purposes, not good enough for No. 3.

No. 5 Barley—Shall include all barley which is badly damaged, or from any cause unfit for malting purposes, except that barley which has been chemically treated shall not be graded at all.

Gal 2 New Grades at Chicago .6 .6 .6 .6 .6 .6

Scotch Barley—The grades of Nos. 1, 2 and 3 Scotch Barley shall correspond in all respects with the grades of No. 1, 2 and 3 Barley, except that they shall be of the Scotch variety.

Bay Brewing Barley—The grades of Nos. 1, 2 and 3 Bay Brewing Barley shall conform in all respects to the grades of Nos. 1, 2 and 3 Barley, except that they shall be of the Bay Brewing variety grown in the territories and on the Pacific Coast.

Chevalier Barley—The grades of Nos. 1, 2 and 3 Chevalier Barley shall conform in all respects to the grades of Nos. 1, 2 and 3 Barley, except that they shall be of the Chevalier variety grown in the territories and on the Pacific Coast.

RULE 7.—"NEW."

The word "new" shall be inserted in each certificate of inspection of a newly harvested crop of oats until the fifteenth day of August; of rye, until the first day of September; of wheat, until the first day of November, and of barley until the first day of May of each year.

This change shall be construed as establishing new grades for the times specified, to conform to the existing grades of grain in all particulars, excepting the distinctions hereby established between the new and the old crop; and shall apply to grain inspected from store for two months after the times respectively above specified.

RULE 8.—HEATING.

All grain that is warm, or that is in a heating condition, or is otherwise unfit for warehousing, shall not be graded.

RULE 9.—REASONS.

All inspectors shall make their reasons for grading grain, when necessary, fully known by notations on their books. The weight alone shall not determine the grade.

RULE 10.—TEST WEIGHT.

Each inspector is required to ascertain the weight per measured bushel of each lot of wheat inspected by him, and note the same on his book.

WATERWAYS

The big cargo record has again been broken, this time by the steamer Crescent City. On August 6 she loaded at South Chicago an even 225,000 bushels of corn, amounting to 6,300 net tons. The largest previous cargo was taken out of South Chicago some weeks ago by the Amazon, and was 217,000 bushels of corn, 6,076 tons.

This year we are enabled to enjoy the unusual sight of all the idle ocean tonnage of the world headed for America to load grain. There have been especially large clearances from England, some of the vessels being already chartered. Many boats that have been laid up for months, unable to get loads, are now getting into commission.

The receipts of wheat at Buffalo, N. Y., from the beginning of navigation to July 31 have been larger than ever before. The receipts of grain, including flour in its wheat equivalent, aggregates 93,948,136 bushels, an increase compared with last year of 15,000,000 bushels; and it is very likely that this pace will be kept up until the close of the season.

As an indication of the great time ahead for the export grain trade it is reported that on July 29 forty steamers were chartered to load cargoes of grain at Philadelphia, New York, Baltimore and Newport News for ports in the United Kingdom and Europe, making a day's record which, it is claimed, has never been equaled. To fill these vessels it will require over 4,000,000 bushels of grain.

In his annual report Col. G. J. Lydecker, Corps of Engineers, announces the practical completion of the 20-foot channel between Duluth and Buffalo. This great work was commenced in 1892, and has been steadily prosecuted ever since. The cost of the 20-foot channel was \$3,340,000. We now have a clear 20 to 21 foot channel through all of the connecting waters on the lakes directly recommended by Congress.

In accordance with a provision of the last river and harbor bill, preliminary examination has been made relative to the construction of a ship canal from the great lakes to the Hudson River. Several routes were mentioned in the report sent to Congress, any one of which would cost \$200,000,000. It is hard to believe that such a project could be undertaken, even in a preliminary way, with New York's experience with canals. And the money of the public is spent on this preposterous scheme

which will come to nothing at all, when the enlargement of the Erie Canal according to present plans would, with the removal of the restrictions imposed by the state, give commercial advantages to New York harbor and assist it in maintaining its shipping. Enterprise is, of course, not to be condemned, but there is a golden mean between the utterly absurd and the palpably impossible.

Grain shippers of St. Louis, Mo., are discussing plans for the establishment of an independent barge line from St. Louis to New Orleans, asserting that present facilities are too meager. It is claimed that by such a line grain could be carried from St. Louis to New Orleans at from 2½ cents to 3 cents per bushel. The present charge by the Mississippi Valley Transportation Co., the only existing barge line, is 6 cents per bushel.

Speaking of this season's cargo records it has been noted that the grain carrying record, which is held by the Crescent City, is 225,000 bushels of corn, equivalent to 6,300 net tons, recently loaded at South Chicago. The Amazon took 217,000 bushels of corn to Buffalo. The Carnegie carried 171,000 bushels of oats, 51,000 bushels of wheat and 55,000 bushels of barley, 5,586 net tons, from Duluth to Buffalo on a draft of a little less than 16 feet 2 inches. The Crescent City moved 5,088 net tons, 318,000 bushels, of oats, from Duluth to Buffalo.

A report from New York tells of a record trip of the canal boat Gamara. She is one of a fleet of steel canal boats which began running from Buffalo to New York on June 20 with three transports in tow, carrying 4,000 barrels of sugar. She was bound for Toledo. The trip was made up the Hudson River to Troy, and from there through the Erie Canal to Buffalo and along Lake Erie to Toledo. Her cargo was unloaded and a cargo of grain taken on. She made the round trip, between 1,500 and 1,600 miles, in twenty-two days nineteen hours and a few minutes.

Government statistics show that the cost of carrying a bushel of wheat from Chicago to New York last year was only one-fourth of the cost in 1872 by lake and rail, and only a little more than one-third of the cost the entire distance by rail. The following shows the remarkable decline in freight rates on wheat, in cents per bushel: In 1872, by lake and canal 24.47, lake and rail 28, all rail 33.50; in 1882, lake and canal 7.89, lake and rail 10.90, all rail 14.60; in 1892, lake and canal 5.61, lake and rail 7.55, all rail 14.23; 1895, lake and canal 4.11, lake and rail 6.95, all rail 12.17.

As showing the great increase in the tonnage of vessels engaged in traffic on the great lakes, a writer in Cassier's Magazine says: Five years ago there was not a vessel on the lakes that displaced 5,000 tons when floating on the St. Mary's river. To-day there are not fewer than twenty high-powered steel-screw steamers which displace about 8,500 tons on the same draft of water. This represents an average increase in the carrying capacity of no less than 70 per cent., and the percentage increase in register tonnage is still higher. Steel cargo steamers, 415 feet in length, and 48 feet in breadth, are now being constructed.

Reports of the harbor work on the great lakes for the year ending June 30, 1896, shows considerable improvement to have been made to the smaller harbors, as well as the larger ones. The river channel at Cleveland is yet to be widened, but the total amount expended for improvements was \$47,180. The harbor entrance has a depth of 22 to 24 feet, the channel entrance 17 to 19 feet. The amount expended at Chicago during the year was \$24,475. No work was done in improving the harbor, but the river was improved by dredging. The amount spent in improving the Calumet harbor at South Chicago was \$58,242.

According to official figures the aggregate entrances and clearances of vessels at the port of Chicago during the year ending June 30, 1896, exceeded those of New York by 4,725 and closely approximated the combined totals of all entrances and clearances at the large ports of Boston, Baltimore, Philadelphia, San Francisco and New Orleans. Here is a port, says the Marine Record, "leading the country in the number of its vessel arrivals and departures, but almost totally neglected in regard to facilities required to carry on the general commerce of the West and Southwest. The feature now in the way of Chicago holding her supremacy in water transportation is chiefly on account of the several tunnels crossing the river and over the crowns of which the shoalest draft is experienced, and inasmuch as the entire course of the river is to be deepened and also widened in places by the government in order to accommodate vessels of modern size, the lowering of the crowns of tunnels has become a necessity." In order to secure the lowering of the tunnels Congress must declare Chicago River navigable to a depth of 20 feet or more. When this has been done it will devolve upon the war department to maintain that depth of water, and the department can lower the tunnels or order their owners to lower them, on the ground that they constitute obstructions to navigation.



William Banholzen, brewer of St. Paul, Minn., died recently.

It is reported that a brewery is to be erected at Creskill, N. J.

Philip Lauer's brewery at Pittsburg, Pa., was recently slightly damaged by fire.

The Leibinger & Oehm Brewing Co. of Ridge-wood, L. I., N. Y., assigned recently.

The Rosenegk Brewing Co. has succeeded to the Richmond Brewery at Richmond, Va.

The Anthracite Brewing Co. of Mt. Carmel, Pa., will erect a brewery at a cost of \$50,000.

The Ideal Brewery at St. Louis, Mo., has been in-corporated with a capital stock of \$30,000.

Wm. A. Seitz, of the firm of Seitz Bros., brewers of Easton, Pa., died July 7, aged 59 years.

The Auburn Brewing Co.'s plant at Auburn, N. Y., was recently sold at auction by the receiver.

The Peoria Malting Co. of Peoria, Ill., has in-creased its capital stock from \$25,000 to \$100,000.

The Hartford Brewing Co. will erect ale and beer breweries with a combined capacity of 150,000 barrels.

The Atlantic City Brewing Co. has been incor-porated at Atlantic City, N. J., with a capital stock of \$300,000.

Mathieu Vonderbank, vice-president of the Jack-son Brewing Co., New Orleans, La., died July 19 at the age of 55.

The Wilmington Brewing Association has been organized at Wilmington, N. C., to erect and operate a large brewery.

Gustav Kuenzel of Milwaukee has succeeded Andrew Lutz, brewer at Stevens Point, Wis., and may extend the plant.

Julius Roesch, brewer of La Grand, Oreg., has erected an addition to his brewery and added con-siderable new machinery.

The Braddock Brewing Co. has been incorporated at Braddock, Pa., with a capital stock of \$1,000, succeeding Philip J. Vischer.

O. P. Townsend, brewer of Laramie, Wyo., has organized a company with a capital stock of \$50,000, to conduct his brewing business.

The Union Brewery at Oshkosh, Wis., owned by J. Glatz & Son, was damaged to the extent of \$10,000 by fire July 29. Insurance \$18,000.

Groenert & Bittner is the name of a new brewing firm at Prairie du Chien, Wis., who have leased and will operate the Schuman & Menges Brewing Co.'s plant.

The North Star Brewing Co. has been incorporated at San Francisco, Cal., with a capital stock of \$30,000. The company will erect and operate a new brewery.

Herman Bartels, president of the Bartels Brewing Co., Syracuse, N. Y., is said to be interested with others in the establishment of a new brewery at Kingston, Pa.

The Orange County Brewing Co. has been incor-porated with a capital stock of \$75,000, at Middle-town, N. Y. Theodore Reinecke is president. A new brewery will be erected.

The Boulder City Brewing Co. of Boulder City, Colo., which has been in receivers' hands for some time, has been reorganized, the new company hav-ing a capital stock of \$200,000.

On account of the death of Joseph Bolton, a mem-ber of the firm of Samuel Bolton's Sons, brewers of Lansingburg, N. Y., the firm has been reorganized and is now carrying on business as the Bolton Brew-ing Co.

According to the last report of the Bureau of Sta-tistics barley malt amounting to 730 bushels, valued at \$732, was imported in June, against 728 bushels, valued at \$576, imported in June, 1896; and during the year ending June 30 imports amounted to 11,-

084 bushels, valued at \$9,384, against 5,579 bushels, valued at \$4,774, imported in the year ending June 30, 1896.

Guido J. Hansen, president of the Hansen Hop & Malt Co., Milwaukee, Wis., died at his home in that city July 21. Mr. Hansen was 62 years old, and had conducted the business of the Hansen Hop & Malt Co. since 1880, when he established the com-pany.

Edward Kraft of Madera, Pa., obtained a patent on a malt turning machine, August 3, which consists of a traveling scoop-box open at both ends and car-rying a shovel sliding on the floor over which the box travels, and a rotating beater-reel working within the box over the shovel. The patent is num-bered 587,444.

The North Dakota Agricultural Experimental Sta-tion at Fargo has been testing fifteen varieties of barley the past four years to determine which gave the largest yields. A recent report gives the fol-lowing as the five best yielders: Mansury barley, yield in 1896, 54.1 bushels; average yield for four years, 43 bushels. Highland Scotch, yield in 1896, 60 bushels; average yield for four years, 39.7 bushels. Highland Chief, yield in 1896, 50.8 bushels; average yield for four years, 38 bushels. Champion of Ver-mont, yield in 1896, 62.7 bushels; average yield for four years, 37.9 bushels. Chevalier, yield in 1896, 42.7 bushels; average yield for four years, 37.5 bushels.

Wm. M. Prinz of Chicago, on July 27, was granted a patent for a malt house, the rights of which he has assigned to the Saladin Pneumatic Malting Construction Co. The patent is numbered 587,161, and the invention combines in a malt house, a fresh-air chamber, and air moistening and attemper-ating chamber, air-ducts establishing communication between the fresh-air chamber and the air moisten-ing and attemperating chamber, situated success-ively above each other and communicating with each other alternately at opposite sides, heating-coils in the lower air-ducts, and valves on the lower and upper air-ducts to regulate the passage of the air and cause the same to pass either directly into the attemperating chamber through the upper duct or over the heating-coils in the lower ducts, or partially through both.

The newspapers appear to have discovered a bona fide maltsters' trust, or combination. According to all accounts the promoter of the movement is Sey-mour Scott, of the Scott Malting Co., Lyons, N. Y. He sent notices to maltsters all over the country in- viting them to a meeting which was held in New York August 3. Other meetings have been held at which were firms representing 80 per cent. of the malt output of the United States. Whatever may be the intention of the maltsters, there is general skepticism among all who are familiar with the business as to the feasibility of the combination scheme. It seems to be the common belief that the very moment the combination tries to advance the price there will be a whole swarm of new malt houses begin operations. Mr. Fred Bullen of Chi-cago said: "I don't believe anything will ever come of the movement, because the only firms likely to go into any such arrangement are the little fellows and perhaps some of the pneumatic concerns."

In the Allgemeine Brauer und Hopfenzeitung Gustav Felix describes some experiments which he has recently been conducting on the effect of water containing gypsum or sulphate of lime on the pro-cess of malting. It appears that he has examined malts prepared respectively with a hard water con-taining about 323 parts of solid matter per 100,000, of which 212 were gypsum, and a water containing 72 parts of solid matter per 100,000, of which 46 were gypsum; and he finds that the malts prepared from the latter were much more satisfactory in every way. He is inclined to consider that the reason is that the hard water does not remove a proper quantity of soluble matter from the grain. There is no doubt that too little attention has been paid to constituents of the water with which malt-ing is performed. The difference between a very hard water and a soft water is very considerable, and it is by no means remarkable that the hard or gypsum constituents of water should be ascertained

to exert a very important influence upon the opera-tion of malting.

The state department at Washington has been urged by United States Consul Henry Robertson at Hamburg to warn American shippers of dried beer grains to refrain from the practice they have adopted of adulterating the grains with ground corn. He says, "The bright future of this important trade is threatened by this practice, and that already the largest German importers are about to cancel heavy orders and protest drafts, upon proof of adulteration of the grains." Mr. Robertson should visit an Amer-ican brewery or a corn mill before writing any more reports on brewers' grains. No doubt im-porters received exactly what they contracted for.

INDIANA GRAIN MERCHANTS WILL ORGANIZE.

It is generally admitted that the regular grain merchants of Indiana are greatly in need of an or-ganization to reform the many abuses which now encumber the trade, and to protect those regularly engaged in the business from the encroachments of the man-with-a-scoop and other transient buyers, who pay no taxes, have no investment or regard for the rights of others and who delight in dis-honest practices which bring the entire trade into disrepute. Therefore it is deemed advisable and in the best interests of the trade to organize an as-sociation of regular grain merchants.

If this movement in the interest of your business and the regular grain merchants of Indiana meets with your favor, kindly sign the declaration fol-lowing and mail immediately to the "American Ele-vator and Grain Trade," 184 Dearborn street, Chi-cago.

The undersigned, being regularly engaged in the buying and selling of grain and the operation of a grain elevator in Indiana, does hereby declare in favor of the organiza-tion of an association to be known as the Indiana Grain Merchants' Association, the membership in which shall rest in firms or companies who operate grain elevators, and others regularly engaged in buying and selling grain whom the elevator men may desire to admit to membership.

The object of this association shall be the advancement and protection of the common interests of those regularly engaged in the grain business.

The first meeting for formal organization shall be held....., 1897, at....., Ind.

Signed.....

.....

Indiana.

The following Indiana grain dealers have signed the foregoing declaration:

- W. E. Hurd, Logansport, Ind.
- United Elevator Co., Kokomo (16 elevators).
- G. L. McLane & Co., Union Mills.
- McCray & Morrison, Kentland.
- Jackway & Murray, Goodland.
- C. M. Lemon, Bedford.
- Taylor & Brown, Pendleton.
- Brook Grain Co., Brook.
- Betts & Unger, Forrest and Russiaville.
- O. P. Taber & Co., Remington.
- F. E. Lowry, Granger.
- L. H. Swan & Son, Wadena.
- C. A. Augspurger & Co., Berne.
- A. B. Cohee & Co., Bringham.
- Studabaker, Sale & Co., Bluffton.

Two named Lafayette as the place for holding the first meeting, one giving date of August 26. Two named Indianapolis, one giving date of October 4. One voted for Logansport, August 26, as place and time for meeting, one Ft. Wayne, September 15. Two would agree to any time and place. The others did not designate any preference.

W. E. Hurd, dealer in grain, hay, etc., at Logans-port, Ind., writes us: "I am heartily in favor of the organization of grain merchants of Indiana. An association cannot be formed too soon to please me."

PRESS COMMENT

BUFFALO ELEVATOR MEN MAY CARRY OWN FIRE RISKS.

There is a move on the part of the elevator owners to lower the rate of insurance, which they have for a long time considered too high. Though they do not care to talk about the situation they have of late been considering the propriety of pulling out of the companies and carrying their insurance on their own account. So far as can be learned they are not well agreed on the proposition, most of them holding that it would be too much of a load for them to take their insurance on their own hands, even if all the interests could be brought in.—Marine Record.

GERMAN ANTI-BOURSE LAW.

The new bourse law was passed to satisfy the German populists. The result has been not what the advocates of the bourse law anticipated. No market prices are obtainable anywhere and even foreign market prices are not published. As a result the farmers, who are about to commence their harvest, are completely at sea in regard to prices. They do not know how much to ask the local buyers for their grain soon to be in the sacks ready for delivery. They have nothing to guide them as to prices and local speculators are making the most of the situation by "bearing" the market and buying grain for future delivery at their own prices.—Times, New York.

AN EFFORT TO IMPROVE CROP REPORTS.

Statistician Hyde, of the Department of Agriculture, will endeavor to improve the monthly crop reports. It is too late, however, to obliterate the inaccuracies which have been worked in so far this season, though the final returns may adjust matters to some extent. An effort to obtain correct and reliable information more in line with the general trend of affairs is highly commendable, and will have the indorsement of the commercial and agricultural press, even if not eminently successful. Possibly a less cumbersome and more efficient list of correspondents would tend to improve the returns and estimates, especially if they were disinterested parties, and in a position to obtain reliable information. The present system appears to be unwieldy, and the list of correspondents contains the names of too many individuals who are not conversant with crop conditions and percentage calculations.—Trade Bulletin, Chicago.

ABOLISH THE BUSHEL.

How nice it would be if the bushel could be abolished and all grain sold by the pound or hundred. The bushel is obsolete, anyhow. The bushel is an ancient device, in use before weights were heard of, before scales were invented, and it is time to abolish it. It is abolished, in fact; no grain is sold by the bushel any more, it is sold by weight, sold by the hundred, but there is an awkward, useless custom of reducing the hundred to a term called bushel, and then calling the bushel worth so much, which multiplied by the number gives the value of so many hundred pounds, an absurd and devious way of determining a very simple proposition. The Pacific States sell grain by the hundred, sell everything by the pound, even eggs, and when a people get accustomed to that system they never dream of going back to bushels, dozens and other antediluvian institutions. On the hundred-pound basis the world could be brought to a uniform system of weights, for grain at least, but on the awkward and obsolete bushel basis it will never agree.—St. Paul Globe.

REBILLING AT KANSAS CITY.

An opinion of more than ordinary importance has just been announced by Commissioner Prouty on behalf of the Interstate Commerce Commission. It relates to a practice which grew out of the milling in transit privilege inaugurated some years ago in the Northwest. Under the practice complained of grain has for years been transported to Kansas City from points west thereof at local rates and subsequently forwarded to Chicago or other eastern points at the balance of a through rate. On this grain there was originally no contract for through shipment nor was its identity sought to be preserved for reshipment. So far as the initial movement was concerned it was a local shipment which was fully accomplished upon delivery in Kansas City. It was not even sought to protect the through rates from the original point of shipment of this grain, but it had become the practice to use such expense bills for grain shipped out of Kansas City as would allow the lowest proportion of the through rate to the line east of that point. Such expense bills possessed a market value and were not infrequently transferred for a consideration. Under such an arrangement manipulation of rates to the detriment of the through shipper located west of

Kansas City became a very common practice and complaint was made accordingly.—Railway Review.

TEXAS FARMERS HOLDING WHEAT.

It is seldom that the wheat crop has been so slow to move, however, as at the present time. It is said by those who have noticed the matter closely that in the years when the crop was the lightest up the Denver that the movement from the Panhandle country was freer than at the present time. The observation will probably apply to a greater or less extent to all portions of the great wheat country of which Fort Worth is the center. Receipts here have been exceedingly light up to date, so light indeed that they have scarcely had a perceptible effect upon the market and the money which has been distributed among the farmers of Tarrant County by this means has not been sufficient to start business moving in Fort Worth, as it was hoped in the spring and early summer when it first became apparent that there would be a good wheat crop.—Mail, Ft. Worth, Tex.

Fires - Casualties

W. A. Ross, grain dealer of Moran, Kans., recently sustained a loss by fire.

Griswold & Co., dealers in grain and hay at Chicago, Ill., recently sustained a damage of \$3,000 by fire. The property was insured for \$2,500.

The H. J. O'Neill Grain Co.'s elevator at Wheeler, Wis., was destroyed by fire recently, together with 5,000 bushels of grain. Loss \$2,000; fully insured.

Edward Horton fell from the roof of an elevator at Earl, Ill., August 3, a distance of 60 feet, and died soon afterward. He was engaged in shingling the roof.

The glucose works at Peoria, Ill., the second largest consumer of grain in the city, were recently destroyed by fire. They will be rebuilt immediately.

Employees at D. H. Currey's elevator at New Holland, Ill., discovered the cob house to be on fire July 27, and prompt work saved the elevator from destruction.

The elevator at Maquon, Ill., owned by E. F. Wing of Elmwood, and containing a large amount of grain, was burned August 10. Loss \$5,000; insurance \$1,500.

John and William Simms' barn and a crib of 10,000 bushels of corn, at Dove, Nebr., were destroyed by fire August 1, entailing a loss of \$3,000. Insurance \$1,700.

The Turner-Hudnut Grain Co.'s elevator at Havana, Ill., was destroyed by fire August 9, together with 50,000 bushels of grain. Loss \$35,000, insurance \$13,000.

F. Raube's grain warehouse at Giddings, Tex., containing a large quantity of grain, hay and feed-stuffs, was demolished by a severe windstorm on the night of July 27.

D. H. Currey's elevator at Mason City, Ill., was twice struck by lightning during a severe storm on July 31, but each time the fire which resulted was quickly extinguished.

The Peavey elevator at Lisbon, N. Dak., was destroyed by fire recently. About 8,000 bushels of wheat were consumed. Loss \$7,000. The fire was probably set by tramps.

An elevator at Rozell, Kans., was destroyed by fire July 21, entailing a loss of \$5,000. The fire was a result of tramps setting fire to a train of freight cars standing on a side track.

Fire recently destroyed the third and fourth stories of the Rush Park Seed Company's warehouse at Independence, Iowa. Insurance on building and fixtures, \$4,000; stock a partial loss.

Clark Carleton, a small boy, was playing about J. H. Hamilton & Co.'s elevator one day recently, and got into the dump and was covered with corn. An alarm was given and he was rescued in time to save his life.

Four men working on the Chicago & Erie Elevator being erected at Chicago fell a distance of 30 feet to the ground on July 21, and one of them, Charles Zehutt, may die. The accident was caused by insecure scaffolding.

The B. & O. Elevator at Tiffin, Ohio, operated by Sneath & Cunningham, was damaged by fire August 4. The blaze was put out before gaining headway. The friction of a pulley against the wooden elevator shaft caused the fire.

Thirteen freight cars broke loose from a train and crashed through J. J. Badenoch's elevator at the Panhandle tracks and Madison Street, Chicago, July 20, doing material damage to the elevator and other property. A long train was backing up to

leave two empty cars at the elevator. Two blocks below the elevator, where the side track begins, a coupling pin broke and the thirteen cars started on a down grade for the elevator. The damage to the elevator, while considerable, was not serious.

The floating elevator Excellent, owned by J. J. Swaine, and located in the harbor of Baltimore, Md., was destroyed by fire July 29, the cause of which is unknown. The loss was \$6,000, covered by insurance. It will be rebuilt.

Fire originating from a hot box caused slight damage to W. S. Russell's elevator at Allentown, Ill., July 30. The fire was discovered and put out before gaining great headway. The loss amounted to \$200, and was covered by insurance.

A large bin in John B. Eaton's elevator at Norwich, Conn., burst July 22, dropping 1,300 bushels of corn. Mr. Eaton and a workman were near the bin when the bottom burst out, but were uninjured. The damage was slight, as all the grain was saved.

John N. Shuler's elevator at Ottawa, Ill., was destroyed by fire August 1, together with 5,000 bushels of corn and oats. The fire originated in the corn shelling room, presumably from spontaneous combustion in corn cobs and chaff. The loss is estimated at \$6,000; insurance on grain \$1,000, on building \$2,000.

R. E. Roberts' elevator, coal sheds and office at Ceresco, Nebr., together with 5,000 bushels of corn, a quantity of wheat and coal, were destroyed by fire at 9 a. m. July 18. The cause of the fire is unknown. Loss \$6,000; partially insured. I. F. Hunter, manager of the elevator, and J. S. Kelly, engineer, were severely injured while fighting the fire.

Hanson & Son's elevator at Latimer, Iowa, was burned July 14, together with 3,000 bushels of oats, 300 bushels of flax and 150 bushels of corn. Hanson & Son carried \$1,000 insurance on grain and \$2,300 on the building, somewhat less than the loss. The fire is supposed to have started from a spark from a passing engine. It will be rebuilt.

Elevator "B" at St. Louis, Mo., belonging to the Geo. P. Plant Milling Co., was slightly damaged by a fire July 28, which originated in a bin, probably from spontaneous combustion of rubbish in the bin. Some grain was also damaged. Loss \$1,500. The building and contents are insured for \$45,000. It is said that the automatic sprinklers in the elevator operated perfectly.

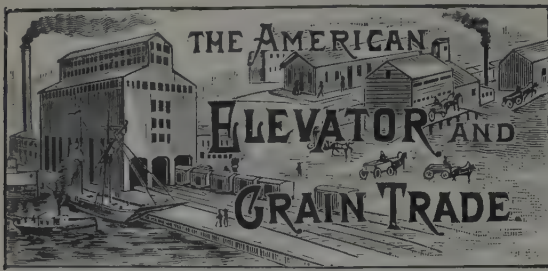
Carr & Brown's elevator at Middletown, Ohio, was damaged by fire at 11:45 August 5, 2,000 bushels of wheat, 35,000 bushels of malt and barley belonging to the Cincinnati Brewing Co., and 15,000 bushels of corn being damaged by smoke and water. The fire started in the cupola from an unknown cause and the building was slightly damaged. The loss was fully covered by insurance.

The St. Paul & Kansas City Elevator at Odebolt, Iowa, was burned at 5 a. m. July 31, together with 3,000 bushels of oats and other grain, and 10,000 bushels of ear corn in cribs. H. Hanson's grain warehouse, near by, was damaged. The loss on the elevator and contents was \$8,000. The fire is supposed to have been caused by spontaneous combustion in coal slack, or it was set by tramps.

Crowder & Springer's elevator at New Lebanon, Ind., collapsed July 21, and 5,000 bushels of wheat were spilled on the ground. The elevator had a capacity of 9,000 bushels, and was almost new, having been built last spring. Such accidents serve as a warning to elevator men that, however small their houses are, they should be erected by builders who have made a study of the construction of such buildings.

The lower elevator building on the Illinois side of the river, south of the Pittsburg dyke, was badly damaged by fire at 11 o'clock last night. How the fire originated is not known. No fire departments were called out to extinguish the blaze, which was permitted to burn itself out. The elevator has been abandoned since the tornado of May 27, 1896, when it was badly wrecked. What grain was in it at the time was removed. The damage will amount to about \$15,000.—Star-Sayings, St. Louis, Mo., July 11.

The Chicago & Northwestern R. R. Elevator at Indiana Street and the Chicago River, Chicago, leased by the Chicago Railway Terminal Elevator Co., was destroyed by fire at 5:30 p. m., August 5. The fire started in or near the cupola from an unknown cause—either spontaneous combustion or a hot box, it is supposed. While the fire was soon discovered, it could not be extinguished, and soon enveloped the whole building. When it had been burning for half an hour a tremendous explosion of dust took place, killing five firemen and injuring fifty others more or less severely. The elevator contained 150,000 bushels of corn, 40,000 bushels of oats and 15,000 bushels of wheat. Loss on the building \$100,000, on the contents \$60,000; insurance on building \$50,000, on contents \$65,000. P. B. Weare, a director of the Terminal Elevator Co., says the elevator will be rebuilt at once.



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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., AUGUST 15, 1897.

Chicago has new rules governing the grading of flax as well as grain. The flaxseed receivers are not pleased by the change, as it raises the quality of No. 1, and are seeking to have the old rules revived.

Kansas City is having an exciting time with the bucket shops. The chief of police wishes to close them and, well—he has not done it yet. The shops of other cities report an unusually large crop of suckers. The active markets have opened many new shops, and soon there will be more.

A railroad company has pledged \$500 to help rebuild an elevator burned recently at Dryden, Mich., which prompts the remark that there is at least one railroad company in the country that appreciates the valuable service the elevator man performs for it and is willing to give some recompense therefor.

Illinois has a law against bleaching grain, yet one of the Chicago elevators, burned recently, had an equipment in it for bleaching oats. If bleaching improves the quality and appearance of oats as is claimed, bleaching is just as much the rightful work of a cleaning elevator as clipping, cleaning or drying. The prejudice against bleaching seems to be very unreasonable in the case of oats.

Prof. W. C. Latta, of the Indiana Experiment Station, in a recent report on tests of new varieties of wheat, says that two conclusions have been reached by these last and other tests. First, most new varieties do not prove valuable and thus fail to carry out the astonishing claims made for them. Second, standard varieties do not "run out" if proper care is regularly taken to select plump, heavy seed and sow it in

good ground. And it is a fact that very few of the new and fabulously prolific varieties ever work their way into the company of old and tried varieties.

The grain dealers of Springfield, Mass., and vicinity have a grain dealers' club which holds frequent meetings for the purpose of advancing the commercial as well as the social life of its members. The grain trade is sorely in need of many more organizations and it is to be hoped the close of the present year will find the trade well supplied.

Galveston will probably provide a drier for hot and wet corn similar to that in use at New Orleans. Every market of importance can attract much trade by providing facilities for improving and caring for all kinds of off-grade grain. Without up-to-date facilities for handling all kinds of grain, no city is entitled to rank as a first-class grain market.

An Indiana grain dealer developed a peculiar phase of the Klondike gold fever. He went to Indianapolis and by forged bills of lading got \$500 from the M. H. Kinney Co. and an equal sum from the Acme Milling Co. A few days later both companies received letters from him stating that both bills were forgeries, that he had taken the money to go to Alaska, and would repay it if successful in his hunt for gold. It is to be hoped that this form of Alaska fever is not contagious.

The Grain Shippers' Association of Northwestern Iowa held its annual meeting at Sioux City July 20 and re-elected the old officers for the ensuing year. After one of the Association's attorneys had reviewed its case against the railroads to recover overcharges on grain, it was decided to push the cases and an assessment was levied. An effort will be made to organize a mutual fire insurance among the elevator owners of the state, but independent of the Association—a far better plan than was adopted last year to secure cheaper insurance. The Association seems to be prospering and its members are not discouraged by the recent reverses in the courts.

One of the anomalies in transportation charges is well illustrated in the Railway Age by a map showing the water and rail routes from Chicago to Fort Worth, Texas. The water route from Chicago to Fort Worth, via the lakes, Atlantic and gulf, is 4,000 miles, while the all-rail route is 1,025 miles. Nevertheless freight can be shipped by the longer route cheaper than by the shorter, notwithstanding the fact that the greater part of the charge by the water route is absorbed by the rail charges from Galveston to Fort Worth. In fact, it costs twice as much to send the goods by rail from Galveston to Fort Worth as it costs to send them from Chicago to Galveston; and yet this long water and rail route is cheaper than the short all-rail route from Chicago to Fort Worth. Kansas City benefits by this anomaly, notwithstanding the fact that the rate between Kansas City and Fort Worth is high, taken by itself. Nothing more clearly shows the value of water transportation to business interests than just such cases as that cited above.

LIST OF REGULAR ILLINOIS DEALERS.

The Illinois Grain Dealers' Association has compiled an extensive list of regular grain dealers in Illinois, which it has published in the form of a convenient pamphlet of 48 pages. This list is being mailed to all reputable commission merchants, track buyers and brokers, with the very reasonable request that they confine their bids to those so listed, or at least before buying of or sending bids to parties not listed they will inquire of the regular dealers at that station or of the Secretary of the Association regarding them. It is to the interest of the receivers and brokers to encourage the regular and discourage the irregular shippers, for it is the farmers and transient shippers who move from place to place that indulge in most of the trickery the central market buyers are victims of. Those regularly engaged in the business have investments in elevator property or an established business, so cannot afford to indulge in sharp practices.

Additions to the list and corrections will be published in each number of this journal, so the dealers will have no excuse for sending bids to or soliciting shipments from irregular shippers. Few will do otherwise now that it is a very easy matter to determine who is regularly engaged in the business.

INDIANA ELEVATOR MEN ORGANIZING.

As is shown by the list of Indiana elevator men published elsewhere in this number, many have already declared in favor of organizing an association to be known as the Indiana Grain Merchants' Association. Others are being received daily and we trust that by the time the next number of this journal goes to press we will have a list of several hundred elevator men, all in favor of organization. The regular dealers of Indiana are not troubled by the man-with-a-scoop so much as the dealers farther west, but they have many trade troubles of their own that are common to the dealers of most of the older states, troubles that can easily be remedied by the combined effort of the sufferers. The transient buyers, however, are troublesome enough to warrant the regular dealers in organizing to discourage the patronage of receivers who handle grain for the country scalpers and farmer shippers. If the regular dealers of Indiana succeed in ridding the trade of this one leech they will be amply repaid for their work.

Other abuses and impositions have become established, so that many of those who give their entire time to the business get little more than a living out of it. It is folly for the dealers to continue to struggle along in the old way, when by organizing they can reform trade practices and get a competency out of the business. The lending of bags to farmers should be stopped; the uncommercial practices of sharp receivers and elevator men at terminal markets could be materially reduced by keeping the country shippers informed regarding same; lower insurance rates can be secured; the day of the reciprocal demurrage charge hastened, and soon, instead of paying rent for a site on which to erect an elevator to load bulk grain into cars, the elevator

man will be paid a loading fee for every hundred pounds loaded in carriers' cars. When organized, the association will experience no trouble in finding plenty of work to do, if a live, energetic man, who is in touch with the trade, is made secretary and paid enough so he can afford to give his time to the work.

So far few have designated their preference as to the time and place of the first meeting. The time should not be too soon, as the movement is likely to fail if a meeting is called before the regular dealers have given organization some thought and enough have declared in favor of it to insure success. One has named the first Monday in October as the day of the first meeting. It surely would be advisable to wait at least that long. We will have many additional names for publication by September 15, and some thought can be given to the constitution and by-laws, and especially to the part relating to membership.

The place of the first meeting should be a railroad center that can be reached conveniently by the majority of those declaring in favor of organization.

The Illinois Grain Dealers' Association has a membership of nearly 400, and more are being added daily. What will the Indiana dealers do? Sign the declaration published in this number and mail promptly.

DUST EXPLOSIONS IN ELEVATORS.

The dust explosion in the Northwestern Elevator, which was burned in Chicago recently, serves to emphasize the necessity of keeping grain elevators clean. Flour mill owners long since learned to their sorrow that flour dust or grain scourgings will explode with tremendous force when mixed with a certain proportion of air and exposed to a flame in an inclosure. Scientists claim and experience bears out their theory, that any vegetable matter, when reduced to an impalpable powder, mixed with air in certain proportions and brought in contact with fire in an inclosed space, will explode. The Northwestern was an old style cleaning house and was not equipped with the pneumatic sweepers of modern elevators which convey the screenings, dust and sweepings from all parts of the house to a dust collector immediately over the furnace, in which they are burned.

The fire started on one of the dirty upper floors of the Northwestern Elevator; about forty-five minutes later an explosion occurred. It is very likely that the supports of some dust laden portion of the building burned away and caused it to fall over the bins and precipitate a large quantity of dust and firebrands into them. If such was the action of the fire, the dust explosion was inevitable rather than mysterious. The fact that a good pneumatic sweeper system in any cleaning elevator will pay for itself in a short time by the reduction of the fuel bill is enough to warrant the placing of this system in every elevator and especially the old elevators containing ancient cleaning machinery and lights with exposed flames. It is not essential that a fire be started before an explosion can occur; the conditions can be obtained without a fire. Many explosions have been caused in flour mills by clouds of dust falling or being blown against a gas jet or a lantern, and the

same thing can occur in a grain cleaning elevator. The only sure way to prevent these explosions is to keep the elevator clean and permit none but incandescent electric lamps in them.

GRAIN HANDLING FACILITIES; A BLOCKADE NOT PROBABLE.

There is a general disposition even among railroad men to think that a car famine and grain blockade is certain to occur this season and interfere with the export grain trade. The crops are large and the export demand promises to exceed all former years. From all sections of the winter wheat belt, Illinois alone excepted, come enthusiastic accounts of large yields of wheat of superior quality; the spring wheat crop of the Dakotas and Minnesota, while of good quality, will not be so large as to cause the railroads of the Northwest any trouble in handling it, unless a boom in prices causes a continued rush to market. The oats crop is not unusually large, although the crop in many districts is heavier than last year's crop. The corn crop will not be a small one, so with the immense stocks of old corn and oats (the supply of old wheat is small, but the present prices should bring it all out), and the good markets, the railroads should be kept busy.

The roads traversing the surplus grain states have been working earnestly for some time to provide enough cars to transport all grain offered, but the temporary blockade at Kansas City gives promise of aggravating delays soon. No doubt the railroads are better prepared to handle a large crop than ever before and there are more of them competing for the freight than ever before. Since the last large crop was marketed, new routes for grain to the seaboard have been established and old ones improved. Galveston and New Orleans have better facilities for handling grain than ever before. Mobile is prepared to handle some export grain, and Port Arthur, as well as Pensacola, will handle grain going out via the Gulf. Atlanta, Port Royal and Charleston may help to avert a blockade, but cannot handle much. Norfolk, Newport News and Baltimore are still struggling along with the meager facilities they had five years ago. As much grain is exported via Chesapeake Bay, any or all of these ports may be expected to be blockaded at any time. Philadelphia has not, like New York, all the elevators it needs to handle its grain trade, but neither city has had a blockade of late years. Boston has one new modern elevator well equipped for handling export grain, and this port is farther relieved by the building of a number of good-sized elevators throughout the state, and the recent completion of the large elevator at Portland, Me. The St. Lawrence route is not likely to cause any trouble, although it has not all the facilities needed. While it is reasonable to think that with the new ports and improved facilities of the old no blockades will occur at the seaboard, a blockade at the Gulf of Mexico or Chesapeake Bay ports would not be a surprise. The Pacific coast has a blockade at Stockton, but Port Costa, Portland, Seattle and Tacoma seem to be handling the grain without trouble.

Some of the interior points are well prepared to handle the large crop, while others have fa-

cilities inferior to those possessed five years ago. Buffalo's new elevators will greatly alleviate the trouble at that point, but the pool, as usual, will cause as much of a delay as possible at the close of the season of navigation, in order to divert a larger percentage of the grain to the railroads. Both the transfer and storage facilities of Buffalo are greatly superior to what they have been heretofore. Erie's new elevator has been completed, and Cleveland's second elevator is about ready for grain. Cincinnati has a new elevator and a transfer car. Fire has reduced Indianapolis' elevator capacity so it is not prepared to handle as much grain as usual. Peoria also suffered at the hands of the fire fiend, but its two elevators are being rebuilt. Kansas City, Omaha and St. Louis have about the same facilities as in 1892, the Great Western elevator at Kansas City and the Burlington at St. Louis making up reductions. Lake Michigan ports, and especially Chicago, are better prepared than ever to handle a large crop. Chicago's new storage elevators more than offset the reduction caused by the burning of the old, out-of-date houses, and the increase in the number and capacity of the grain transfer elevators will greatly facilitate the transfer of grain from the cars of the western to those of the eastern roads. The city's transfer elevators can transfer over 1,000 cars a day and do some clipping besides. The Grand Trunk, Michigan Southern, Erie, Pennsylvania and Michigan Central transfer elevators have been erected since the last blockade, so the grain will not be delayed so long as in 1892 by a refusal of western roads to permit their cars to be taken East. Transfer elevators have also been erected at Kankakee, Savanna, Decatur and Sheldon, Ill., so Chicago will be further relieved and congestion prevented.

With the increased handling facilities at terminal and junction points, and the greatly increased carrying capacity of both the rail and the water routes, it would seem that a general blockade can occur only as a result of intense stupidity on the part of railroad managers. Buffalo, Kansas City, Galveston and Baltimore may be expected to experience some trouble, but it can and no doubt will be quickly remedied.

THE TESTER IN OHIO AND INDIANA.

Ohio has a law forbidding the use of a tester of less than one-half bushel capacity in buying grain from the producer, and Indiana has a law forbidding the use of a tester of less than one-half bushel capacity in buying wheat. Kentucky is also credited with having a similar law, but this is doubtful.

No doubt the Ohio law is unconstitutional, as it discriminates between classes. None but a one-half bushel tester is allowed in buying grain from a producer; when buying from any other person the law permits anything from a chemist's balance to a wagon scale. Class legislation is permitted by few states, and we doubt that Ohio is one of them. However, dealers and millers have joined hands to take the case mentioned by the superintendent of the Cincinnati Chamber of Commerce in this number to the highest courts, and if they succeed in knocking out the law, Indiana grain buyers will follow suit.

EDITORIAL MENTION

The grading of barley should be improved or abolished.

Cooper well your cars and thereby help to reduce the shortages.

Every Indiana elevator man should sign the declaration in favor of a state grain merchants' association, which is published in this number.

Have your bills of lading marked "Freight C. O. D." and you will not have to pay it, as well as lose the grain, in case the receiver defaults.

The golf and bike suits became so loud on the trading floor of the Chicago Board of Trade that they have been banished. Unmerited fate. When will the reformers stop?

The style of the well-known firm of E. R. Ulrich & Son, shippers of western grain at Springfield, Ill., has been changed to E. R. Ulrich & Sons, Mr. C. M. Ulrich having been admitted to the firm.

Horrible sight! Think of it! A Superior elevator man has painted his elevator an olive green. Are we to have fashions in elevator dresses, or will the trade resent this painful departure from the conservative dull red used these many years?

Prof. W. G. Johnson has discovered the corn borer in the cornfields of Maryland. Some of the farmers are greatly alarmed by the damage done by this pest. We will have enough corn to go around, even if the borers do destroy the corn crops of Maryland and Delaware.

The receipts of the Kansas grain inspection department were very light during the early part of the season, but henceforth the department will at least be able to pay expenses. When the new inspector gets the department running according to his own ideas the trade is not likely to have any cause for complaint.

A railroad is projected from Winnipeg, Man., to Duluth for the purpose of bringing the wheat fields of the Northwest nearer to water transportation and to relieve the export grain trade of the exorbitant charges levied by the Canadian Pacific Railway Co. Manitoba's export grain trade has been greatly handicapped by the unreasonable freight charges.

The grain tester is causing considerable trouble to Milwaukee dealers as well as those of Ohio and Indiana. In Milwaukee an effort has been made recently to have the directors of the Chamber of Commerce abolish the test weight requirement of No. 2 Spring Wheat, but the millers objected and a contest ensued. The Chicago Inspection Department, as is shown by a statement in this number from Chief Inspector Noble, uses the tester in grading No. 3 Spring and No. 3 Winter Wheat only. The time re-

quired to determine the weight per measured bushel of grain is such as to preclude the use of the tester in grading all grain.

The jug-handled demurrage charge should be abolished. The delays by carriers far outnumber and exceed in time the delays by shippers and receivers. This long tolerated exaction should be stopped. If carriers are not willing to pay for the delay of grain, they should cease charging their helpless patrons for delay of cars.

The St. Lawrence all-water route is gaining favor with the grain exporters and as soon as the transferring facilities are improved and the channels deepened the Erie route will have a competitor that will get a good portion of its traffic. If we desire to compete with other grain exporting countries, when they have grain to spare, it is necessary to get our grain into foreign markets at the lowest possible cost.

The pessimists who delight in persistently predicting the termination of our export grain trade have found a new gong to sound its death knell upon; they call it Siberia. India, Argentina, Australia, Roumania and a score of minor producers have each in turn been championed by these self-constituted prophets, but the exports of the United States have continued to increase and the prophets, all undismayed, have sought new idols.

Tennessee has a very stringent anti-trust law, under the provisions of which Judge Anderson of Nashville sought to have the millers of the city indicted, the offense being that they employed a common buyer, which fact was alleged to destroy competition in the grain market. The grand jury, however, failed to find any evidence that any infraction of the law had been made, and so another mythical "wheat trust" was disposed of. Just imagine three millers in one town controlling the price of wheat.

Every elevator head constructed with a hopper under pulley to catch dust and falling grain should be remodeled so as to prevent any accumulation whatever of dirt and dust. As is explained in this number, a recent midnight fire has been traced direct to such a hopper. Elevator men cannot afford to lose their houses this year—too much work to do. Those who have hopper bottomed elevator heads will reduce the chances of fire by cutting a good sized hand hole in same so that interior can be examined without tearing it to pieces.

North Dakota's obnoxious law requiring grain commission men, who send solicitors into the state, to file a bond for \$10,000 is being complied with by a few receivers. The state's hotel keepers will suffer more as a result of the law than any others, and the bucolic shippers of the grain they grow will be tempted to consign their grain to irresponsible parties by the extravagant statements and promises of luring circulars, just as before. The responsible receivers are about the only ones who send out solicitors. The sharpers which the state cannot reach would not go to so much expense. If North Dakota farmers would sell their grain

to their local dealer or pay him a commission for marketing it for them they would not lose grain through the medium of irresponsible receivers.

The Illinois law relating to the weighing of grain by the state is defective in that it does not require the elevator men to employ the service of the state weighing department. Hence it would be useless for the Railroad and Warehouse Commission to organize such a department. A state weighman was appointed, as provided by the law, at Chicago, seven or eight years ago, but he could get no weighing to do, so the attempt to establish a state department was abandoned.

A fire on August 1 destroyed an old landmark that was once a factor in the grain trade of Northern Illinois. This was the old starch factory at Ottawa, Ill. The works were built several years before the war, when the West was young. It was a six-story building, 200 feet long and a great establishment for those early days. It was operated as a starch factory for about twenty years and then turned to other uses. It was one of the first attempts to establish a large home manufacturing market for corn other than distilleries, and was not an unqualified success.

The Minnesota Railroad and Warehouse Commission has not yet attempted to dictate how much the country elevator men shall pay for grain, but it is approaching that position. A form of certificate has recently been provided (see copy in this number) for the use of country elevator men whose elevators stand on railroad ground, and the elevator men are denied the right to use any other; in fact, any other contracts for storage are pronounced null and void. The right to contract as they like is denied to both the elevator man and the farmer. Such rigid regulation as Minnesota is attempting will not always be tolerated.

The grain shipping public will be pleased to learn that the Interstate Commerce Commission has decided for the complainants in the case of Suffern, Hunt & Co. vs. I., D. & W. Ry. Co. and the C., H. & D. Ry. Co. These cases were reviewed in this journal for November, 1896. A complete digest of the decision will be published in the next number of this journal. The I., D. & W. Ry. Co. attempted to establish a minimum and maximum carload weight within 4,000 pounds of marked capacity by a circular notice. The Commission held that "Rules or regulations which in any wise change, affect or determine any part of the aggregate of a carrier's rates, fares or charges must be shown separately upon the carrier's posted schedule of rates, fares and charges; and any such rules or regulations promulgated by the carrier in circulars issued independently of its rate schedules are not lawfully in force." The Commission also held that the complainant was entitled to recover charges collected in excess of those set forth in schedule, and that the minimum carload weight was unreasonable. The complainants won every point they were contesting for, and more, which is truly remarkable when it is considered that two railroads were the defendants.

THE EXTRAORDINARY EXPORTS OF CORN.

The public press has been expatiating on the great benefit which will accrue to this country and the farmer from the foreign demand for wheat and with good reason. But it must not be forgotten that corn is playing an important part in the revival of business prosperity. The exports of corn for July aggregated 12,405,466 bushels, as compared with 5,612,751 bushels for July, 1896. And for the first seven months of 1897, the exports have amounted to 115,600,159 bushels. This is nearly double the exports of corn for the corresponding time last year, which were 64 million bushels in round numbers.

Should this extraordinary movement of corn continue, the total exports for the present year will reach or pass 200,000,000 bushels, the largest on record. In fact, the year, as it already stands, is a record breaker. And corn meal is sharing in the boom created by the meager harvests abroad, and for the first seven months of the year the exports have been 361,474 barrels, against 143,336 barrels for the corresponding period of 1896. This would seem to indicate that the European is taking more kindly to corn as human food, though of course there is no evidence to show how large a proportion may be used for other purposes, as feeding, distilling, etc. Of course, the reason for these large exports of our great staple is its present cheapness. Whether it would move as freely after a considerable advance is hard to say. It could advance considerably and yet be relatively cheap; but high corn prices have always caused corn exports to fall off.

Trade Notes

The Frost Mfg. Co., Galesburg, Ill., has been running a full force full time and reports more work than any time in the past three years.

The Hammond Grain & Seed Separating Co. has been incorporated at Indianapolis, Ind., with a capital stock of \$100,000. The directors are R. L. Duvall, E. E. Towle and B. C. Caldwell.

Jonas Aiken has invented a device for transporting grain long distances through pipes by means of suction. He is exhibiting his machine at Orlando, Fla., and it is said to be attracting a great deal of attention.

A new company has been incorporated at Montreal, Canada, for the purpose of manufacturing grain cleaners and separators. It is entitled the Duvall-Miller Mfg. Co., and has a capital stock of \$100,000.

The Foos Mfg. Co., Springfield, Ohio, is building up quite a trade in Mexico. Among recent shipments was a carload of Scientific Mills to Sommer, Hermann & Co., City of Mexico, the Foos Company's representative in that country.

Mr. Louis E. Barbeau, president of the S. Howes Co. of Silver Creek, N. Y., left on August 4 for a business trip to Europe, in connection with his London house at 64 Mark Lane. Mr. Barbeau expects to be absent seven or eight weeks.

The new Era Iron Works Co., manufacturer of gas engines at Dayton, Ohio, writes us regarding the new rules of the New England Insurance Exchange governing the installation of gasoline and naphtha engines, published in the July number of the "American Elevator and Grain Trade," that they can find no objections to the rules laid down by the insurance companies in question. They say: "With the New Era Engine we can comply with all of

these rules without any effort. In fact, all of the gasoline engines that we send out will comply with all of the rules mentioned."

Grain men will notice the card of Geo. L. Catlin, Lock Box 9, Monon, Ind., advertising his grain tables in our column of "Miscellaneous Notices." The price, 12 cents, is a small sum to pay for the convenience of such a labor and time saving contrivance, and grain men who have used these tables declare them cheap at ten times the price.

The S. Howes Co., Silver Creek, N. Y., manufacturer of the Eureka Grain Cleaning Machinery, writes us that business with it is very good, so good, in fact, that it has been running its works until 9 o'clock in the evening. July was an exceptionally good month and prospects are flattering that the Eureka Works will have all they can do henceforth.

The well-known firm of James Leffel & Co., Springfield, Ohio, U. S. A., have issued a neat, new pamphlet "D," replete with numerous illustrations and descriptions of the throttling and automatic engines, with portable and stationary boilers, which they are building in a variety of sizes and styles. Copy is sent free to parties interested, on application to the company.

The New Era Iron Works, Dayton, Ohio, have issued a neat catalogue of the New Era Gas and Gasoline Engines. It contains in compact form all that an interested party would be likely to desire to know concerning a motor. It contains illustrations of the New Era and its working parts, with a number of testimonial letters from users, price list, etc. The New Era Iron Works will mail a copy on application.

Mr. R. S. McFarlane, who was for many years superintendent for the old firm of Metcalf-Macdonald Co. and more recently with the Macdonald Engineering Co. and James Stewart & Co., has bought an interest in the Macdonald Engineering Co. He has assumed the duties of general superintendent of elevator construction. Mr. McFarlane has had wide experience in elevator construction, and his association with the Macdonald Engineering Co. will form a well equipped and able combination for the construction of grain elevators of all kinds and sizes.

The Allen Anti-Rust Mfg. Co. of Cincinnati, Ohio, has issued a breezy circular letter on the business situation, which is worth quoting. It says: "We do not expect to put eggs under a setting hen at evening and have spring chickens hatched in time for next morning's breakfast, neither do we expect to have the new tariff bill start all the wheels of commerce this week. The voice of the calamity howler is drowned by the voices of tens of thousands of grangers calling for more cars to move the most magnificent crops this country has ever produced. The splendid courage of our gold miners, who have invaded the frozen zone, and whose only fear now seems to be that gold-dust will become as abundant and as cheap as sawdust, all indicate that the long-looked-for revival of general business is near at hand. This brief line is to remind you that we are alive to the improved business conditions, and solicit your orders for our Anti-Rust Roof Paint, which we commend to you as of special merit for prolonging the life of old tin, iron or steel roofs. Congratulating you and ourselves on the improved conditions of this, the greatest country the sun shines on, and awaiting your orders, we remain," etc.

C. A. Augspurger & Co., dealers in grain, seeds, etc., at Berne, Ind., write us: "We heartily coincide with your proposition to organize an Indiana grain merchants' association. We hope it will be started at once, and we shall gladly uphold it."

The Grain, Hay & Feed Receivers' Association of Cincinnati held its semi-annual meeting recently, at which the old officers were reelected for the ensuing six months, as follows: President, John H. Allen; treasurer, J. A. Loudon; secretary, Charles L. Garner. The Association has accomplished important work in reorganizing the grain business and putting it on an actual cash basis.

Late Patents

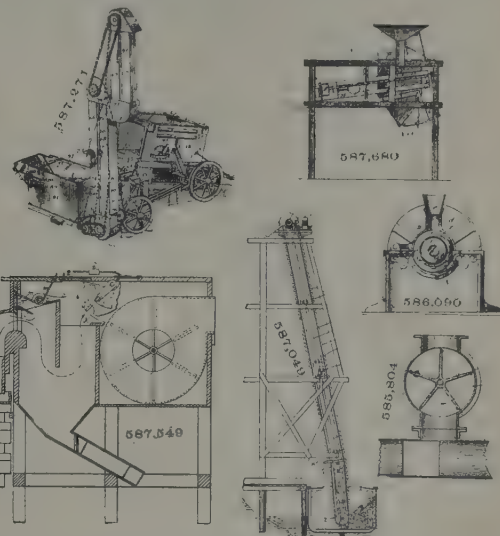
Issued on July 6, 1897.

Gas Engine.—Franz Burger, Ft. Wayne, Ind., assignor of three-quarters to Henry M. Williams, same place. No. 585,651. Serial No. 505,205. Filed March 26, 1894.

Gas Engine.—Jas. A. Charter, Beloit, Wis. No. 585,652. Serial No. 607,087. Filed Sept. 26, 1896.

Automatic Weighing Apparatus.—Michael E. Reisert, Hennef, Germany. No. 585,785. Serial No. 500,866. Filed Feb. 20, 1894.

Feeder for Grain Transfer Systems.—Frederick J. Weber, Connersville, Ind., assignor to the Steel Storage and Elevator Construction Co., same place. No. 585,806. Serial No. 635,259. Filed May 5, 1897. See cut.



Starting Mechanism for Gas Engines.—Simeon Colley Sr. and Simeon Colley Jr., Springfield, Ohio. No. 585,952. Serial No. 625,263. Filed Feb. 27, 1897.

Issued on July 13, 1897.

Rice Hulling Machine.—Herman A. Barnard, Moline, Ill., assignor to The Barnard & Leas Mfg. Co., same place. No. 576,090. See cut.

Grain Washer.—Wm. H. Hastings and Chauncey E. Foster, Minneapolis, Minn. No. 586,125. Serial No. 589,217. Filed April 27, 1896.

Gas Engine.—Charles Jacobson, Brooklyn, N. Y., assignor to the Climax Gas Engine Co., same place. No. 586,312. Serial No. 563,569. Filed Sept. 24, 1895.

Gas Engine.—John D. Russ, Rahway, N. J., assignor by direct and mesne assignments to Maxwell Wyeth & Co., Brooklyn, N. Y. No. 586,321. Serial No. 577,224. Filed Jan. 29, 1896.

Gas or Vapor Engine.—Eugene P. Woillard, Sugden, Fla. No. 586,409. Serial No. 587,625. Filed April 15, 1896.

Issued on July 20, 1897.

Dust Collector.—Daniel W. Marmon, Indianapolis, Ind., assignor to the Nordyke & Marmon Co., same place. No. 586,742. Serial No. 618,659. Filed Jan. 9, 1897.

Grain Cleaner and Separator.—Jas. C. Benson, Alcony, Ohio. No. 586,756. Serial No. 623,630. Filed Feb. 16, 1897.

Explosive Engine.—Frederick A. Redmon, San Francisco, Cal., assignor to Bainbridge L. Ryder, same place. No. 586,826. Serial No. 608,345. Filed Oct. 9, 1896.

Issued on July 27, 1897.

Grinding Mill.—Jas. F. Winchell, Springfield, Ohio, assignor to the Foos Mfg. Co., same place. No. 586,984. Serial No. 641,183. Filed June 14, 1895. Renewed June 17, 1897.

Elevator.—Benj. W. Tucker and Wm. S. Corwin, Newark, N. J. No. 587,049. Serial No. 586,671. Filed April 8, 1896. See cut.

Grain Elevator.—Samuel M. Peterson, Kent, Minn. No. 587,271. Serial No. 597,605. Filed June 30, 1896. See cut.

Issued on Aug. 3, 1897.

Separator for Grain, etc.—Chas. P. Fullmer, Benton, Pa., assignor of one-half to Wm. H. Magill, same place. No. 587,549. Serial No. 595,833. Filed June 17, 1896. See cut.

Feed Grinding Mill.—Thos. L. Phillips, Aurora, Ill., assignor to the Chicago Wind Mill & Feed Mill Co., Batavia, Ill. No. 587,555. Serial No. 590,275. Filed May 5, 1896.

Automatic Grain Weigher.—Angus McLeod and John H. McLeod, Marietta, Kans. No. 587,680. Serial No. 601,359. Filed Aug. 1, 1896. See cut.

Gas Engine.—Adolph A. Williams, Duluth, Minn. No. 587,627. Serial No. 588,112. Filed April 18, 1896.

RANGE OF PRICES AT CHICAGO.

The daily range of prices for cash grain at Chicago since July 15 has been as follows:

July.	NO. 2 R.W. WHT.		NO. 2 SFG. WHT.		NO. 2 CORN.		NO. 2 OATS.		NO. 2 RYE.		NO. 3+ BARLEY.		NO. 1 FLAXSEED.	
	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.
15	74 1/4	74 3/4	25 1/4	26 1/4	18 1/4	18 3/4	30	33	78	80	78	80	78	80
16	74 1/4	74 3/4	25 1/4	26 1/4	18 1/4	18 3/4	30	33	78	80	78	80	78	80
17	75	76	25 1/4	26 1/4	18 1/4	18 3/4	30	33	78	80	78	80	78	80
18	74 1/4	74 3/4	25 1/4	26 1/4	18 1/4	18 3/4	30	33	78	80	78	80	78	80
19	74 1/4	74 3/4	25 1/4	26 1/4	18 1/4	18 3/4	30	33	78	80	78	80	78	80
20	75	76	25 1/4	26 1/4	18 1/4	18 3/4	30	33	78	80	78	80	78	80
21	77	78 1/2	26 1/4	26 3/4	17 1/4	17 3/4	37 1/4	37 3/4	29	32	81	81 1/4	81 1/4	81 1/4
22	75 1/2	77	26 1/4	26 3/4	17 1/4	17 3/4	38	39	29	31	83 1/2	83 1/2	83 1/2	83 1/2
23	75 1/2	77	26 1/4	26 3/4	17 1/4	17 3/4	37	37 1/2	28	33	83 1/2	83 1/2	83 1/2	83 1/2
24	75 1/2	77	26 1/4	26 3/4	17 1/4	17 3/4	37	37 1/2	28	33	83 1/2	83 1/2	83 1/2	83 1/2
25	76 1/2	76	27	27 1/2	17 1/4	17 3/4	38	38 1/2	28	31	82 1/2	82 1/2	82 1/2	82 1/2
26	77 1/2	78 1/4	26 1/4	27	17 1/4	17 3/4	38	39	29	30	83 1/2	83 1/2	83 1/2	83 1/2
27	77 1/2	78 1/4	26 1/4	27 1/4	17 1/4	17 3/4	39 1/2	39 1/2	30	33	84 1/2	84 1/2	84 1/2	84 1/2
28	77 1/2	78 1/4	26 1/4	27 1/4	17 1/4	17 3/4	39 1/2	39 1/2	30	33	84 1/2	84 1/2	84 1/2	84 1/2
29	75 1/2	75 3/4	27	27 1/4	17 1/4	17 3/4	39 1/2	40	33	33	84 1/2	84 1/2	84 1/2	84 1/2
30	76 1/2	77 1/2	27 1/4	28 1/4	17 1/4	17 3/4	40	41 1/2	29	29	87	87 1/2	87 1/2	87 1/2
31	76 1/2	76 3/4	27 1/4	28 1/4	17 1/4	17 3/4	41	41	29	33	88	88	88	88
Aug.														
1	77 1/2	75 1/4	28	28 1/4	17 1/4	17 3/4	41 1/2	41	29	32	87 1/2	88	88	88
2	77 1/2	75 1/4	28	28 1/4	17 1/4	17 3/4	42 1/2	42	28	34	89 1/2	90	90	90
3	78 1/4	79	28 1/4	28 3/4	17 1/4	17 3/4	43	43	27	27	90 1/2	90 1/2	90 1/2	90 1/2
4	80 1/2	80 3/4	27 1/4	29 1/4	17 1/4	17 3/4	43	43	27	27	90 1/2	90 1/2	90 1/2	90 1/2
5	79 1/4	80	27 1/4	28 1/4	17 1/4	17 3/4	42	42 1/2	30	35	89 1/2	89 1/2	89 1/2	89 1/2
6	79 1/4	80	26 1/4	27 1/4	17 1/4	17 3/4	41 1/2	41 1/2	29	35 1/2	89 1/2	89 1/2	89 1/2	89 1/2
7	79 1/4	79 3/4	26 1/4	26 3/4	16 3/4	17	41 1/2	42	28	28	89	89 1/2	89 1/2	89 1/2
8	79 1/4	80 1/4	26 1/4	26 3/4	16 3/4	17	41 1/2	42 1/2	29 1/2	29 1/2	89 1/2	90	90	90
9	79 1/4	80 1/4	26 1/4	26 3/4	16 3/4	17	41 1/2	42 1/2	29 1/2	29 1/2	89 1/2	90	90	90
10	83 1/2	83 1/2	27 1/4	27 1/4	16 3/4	17 1/4	43	43 1/2	29	29	94 1/2	96	96	96
11	84 1/2	84 1/2	27 1/4	27 1/4	17 1/4	17 1/4	44 1/2	45	29	29	94 1/2	96	96	96
12	86 1/2	87	27 1/4	28 1/4	17 1/4	17 1/4	45 1/2	46	37	37	99 1/2	99 1/2	99 1/2	99 1/2
13	85 1/2	85 1/2	28 1/4	28 1/4	17 1/4	17 1/4	45 1/2	46	28	28	98 1/2	99 1/2	99 1/2	99 1/2
14	84 1/2	84 1/2	27 1/4	28 1/4	17 1/4	17 1/4	45 1/2	45 1/2	28 1/2	30	98 1/2	98 1/2	98 1/2	98 1/2

*Holiday. †Free on board or switched.

During the week ending July 24 Prime Contract Timothy sold at \$2.75 per cental, Prime Contract Clover Seed at \$7.00, Hungarian at \$0.50@0.60, German millet at \$0.50@0.75, buckwheat at \$0.65@0.70 per 100 pounds.

During the week ending July 31 Prime Contract Timothy sold at \$2.70@2.75 per cental, Prime Contract Clover Seed at \$7.00, Hungarian at \$0.50@0.60, German millet at \$0.50@0.75, buckwheat at \$0.60@0.75 per 100 pounds.

During the week ending August 7 Prime Contract Timothy sold at \$2.70@2.75 per cental, Prime Contract Clover Seed at \$7.00, Hungarian at \$0.50@0.60, German millet at \$0.50@0.75, buckwheat at \$0.60@0.75 per 100 pounds.

During the week ending August 14 Prime Contract Timothy sold at \$2.70 per cental, Prime Contract Clover Seed at \$7.00, Hungarian at \$0.50@0.60, German millet at \$0.50@0.70, buckwheat at \$0.60@0.70 per 100 pounds.

RECEIPTS AND SHIPMENTS AT CHICAGO.

The following table, compiled by George F. Stone, secretary of the Board of Trade, shows the receipts and shipments at Chicago during July, 1897 and 1896, of seeds, hay and broom corn:

	Receipts.	Timothy lbs.	Clover, lbs.	Other Grass Seeds, lbs.	Flax-seed, bu.	Broom Corn, lbs.	Hay, tons.
1897	266,716	64,115	179,531	218,650	473,240	16,044	
1896	332,701	57,355	205,260	422,070	503,300	16,445	
Shipments							
1897	452,540	65,024	970,348	45,661	888,420	987	
1896	1,036,819	44,677	544,873	565,350	815,292	5,329	

RECEIPTS AND SHIPMENTS AT TOLEDO.

The receipts and shipments of grain and hay at Toledo, Ohio, during the month of July, 1897, as compared with the same period of the preceding year, were, according to Denison B. Smith, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	1,072,249	1,432,089	639,394	697,800
Corn, bushels.....	681,432	1,777,900	1,066,000	77,200
Oats, bushels.....	20,433	10,900	10,477	17,600
Barley, bushels.....				
Rye, bushels.....	35,233	71,200		100,800
Clover Seed, bags.....				
Flour, barrels.....	3,449	5,634	54,502	105,743

EXPORTS FROM ATLANTIC PORTS.

The exports of breadstuffs, as compiled by George F. Stone, secretary of the Chicago Board of Trade, from the Atlantic ports during the two weeks ending Aug. 7, as compared with same weeks last year, have been as follows:

Articles.	For week ending Aug. 7.		For week ending July 31.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	1,655,000	1,236,000	1,266,000	1,099,000
Corn, bushels.....	3,401,000	1,088,000	1,776,000	2,031,000
Oats, bushels.....	843,000	769,000	1,732,000	809,000
Rye, bushels.....	284,000	112,000	129,000	172,000
Flour, barrels.....	256,000	258,100	252,600	365,900

RECEIPTS AND SHIPMENTS AT PEORIA.

The receipts and shipments of grain and hay at Peoria, Ill., during the month of July, as compared with the same period of the preceding year, were, according to R. C. Grier, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	26,400	303,800	4,800	178,500
Corn, bushels.....	994,800	983,550	451,950	308,250
Oats, bushels.....	911,250	968,450	844,350	1,345,050
Barley, bushels.....	8,400	9,000	11,200	7,000
Rye, bushels.....	1,200	14,700		4,800
Mill Feed, tons.....				
Seeds, pounds.....			60,000	
Broom Corn, pounds.....	60,000	90,000	30,000	44,000
Hay, tons.....	1,260	990	260	450
Flour, barrels.....	25,350	20,850	25,650	21,150
Spirits and Liquors, bbls.				
Syrup and Glucose, bbls.				

RECEIPTS AND SHIPMENTS AT SAN FRANCISCO.

The receipts and shipments of grain and hay at San Francisco, Cal., during the month of July, as compared with the same period of the preceding year, were, according to T. C. Friedlander, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, centals.....	666,846	574,426	570,631	527,676
Corn, ".....	14,945	13,493	5,221	2,313
Oats, ".....	34,780	41,815	1,488	4,488
Barley, ".....	364,533	490,797	117,760	275,707
Rye, ".....	5,856	3,125		
Flaxseed, centals.....	826	817		
Hay, tons.....	23,698	16,006	742	393
Flour, barrels.....	106,431	157,262	67,513	132,677

RECEIPTS AND SHIPMENTS AT DETROIT.

The receipts and shipments of grain and hay at Detroit, Mich., during the month of July, as compared with the same period of the preceding year, were, according to F. W. Waring, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	119,930	340,687	11,137	64,486
Corn, bushels.....	155,501	97,359	49,782	14,696
Oats, bushels.....	114,575	94,181	11,545	15,382
Barley, bushels.....	15,335	18,400		
Rye, bushels.....	17,628	57,497	24,114	31,864
Hay, tons.....				
Flour, barrels.....	32,450	13,010	11,150	10,150

RECEIPTS AND SHIPMENTS AT DULUTH.

The receipts and shipments of grain and hay at Duluth, Minn., during the month of July, as compared with the same period of the preceding year, were, according to Frank E. Wyman, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	2,616,128	4,534,394	1,992,536	5,551,148
Corn, bushels.....	13,367	26,422		26,098
Oats, bushels.....	780,422	439,292	861,636	396,478
Barley, bushels.....	282,632	439,101	257,449	246,659
Rye, bushels.....	166,515	170,041	153,528	353,594
Grass seed, pounds.....				
Flaxseed, bushels.....	267,497	238,557	502,831	292,567
Flour, barrels.....	551,205	375,010	844,735	638,020
Flour production Duluth and Superior.....	222,595	245,785		

RECEIPTS AND SHIPMENTS AT KANSAS CITY.

The receipts and shipments of grain and hay at Kansas City, Mo., during the month of July, as compared with the same period of the preceding year, were, according to E. D. Bigelow, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, cars.....	3,950	2,124	1,364	
Corn, cars.....	1,130	2,080	815	
Oats, cars.....	268	499	88	
Barley, cars.....				
Rye, cars.....	7	8	3	
Flaxseed, cars.....	19	471	9	
Hay, cars.....	674	1,136	175	
Flour, cars.....			198	
Brn, cars.....				

RECEIPTS AND SHIPMENTS AT ST. LOUIS.

The receipts and shipments of grain and hay at St. Louis, Mo., during the month of July, as compared with the same period of the preceding year, were, according to George H. Morgan, secretary of the Merchants' Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	1,240,958	2,178,932	262,400	488,066
Corn, bushels.....	498,296	1,704,068	562,516	812,879
Oats, bushels.....	778,004	706,748	272,790	169,089
Barley, bushels.....	2,156	4,584	2,140	2,100
Rye, bushels.....	8,060	12,898	32,179	7,040
Hay, tons.....	10,090	11,516	40,030	4,703
Flour, barrels.....	90,595	121,475	127,380	156,834

RECEIPTS AND SHIPMENTS AT MILWAUKEE.

The receipts and shipments of grain and hay at Milwaukee, Wis., during the month of July, as compared with the same period of the preceding year, were, according to Wm. J. Langson, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	503,440	528,902	92,250	47,950
Corn, bushels.....	84,500	104,000	13,000	8,450
Oats, bushels.....	597,000	1,084,000	750,265	1,356,561
Barley, bushels.....	364,800	112,980	176,144	96,943
Rye, bushels.....	131,575	48,665	214,318	54,000
Grass seed, pounds.....	30,000	110,470	48,000	82

INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector E. J. Noble, the grain received at Chicago during the month of July, 1897, was graded as follows:

WINTER WHEAT.											
Railroad.	White.			Hard.			Red.				No G'de.
	2	3	4	1	2	3	1	2	3	4	
C. B. & Q.					106	38		8	21	9	1
C. R. I. & P.					46	36		3	5	8	
Chicago & Alton.					15	22		12	20	12	1
Illinois Central					30	27		170	48	12	
Freeport Div. I. C.											
Galena Div. C. & N. W.				1	14	7					
Wis. Div. C. & N. W.								1	1		
Wabash					1	2		16	15	5	
C. & E. I.	1	4						90	111	5	2
C. M. & St. P.			1		14	9		2	6	1	
Wisconsin Central.											
Chicago & Great West.					3	1					1
A. T. & S. Fe.					116	12		21	20	3	
E. J. & E.					47	2			1		
Through and special						1		428	174	21	2
Total each grade.	1	5		1	393	157		751	422	76	7
Total winter wheat.				6							1813

SPRING WHEAT.													
Railroad.	Colo- rado.		Northern.	2	3	4	No Grade.	White.		Mixed Wheat.			
	2	3						2	3	2	3		
C. B. & Q.				1	1	1			2				
C. R. I. & P.					2	5							
Chicago & Alton													
Illinois Central													
Freeport Div., I. C.													
Galena Div., C. & N. W.	1				15	13		3					
Wis. Div., C. & N. W.					1								
Wabash													
C. & E. I.													
C. M. & St. P.	2				20	147		7					
Wisconsin Central													
Chicago & Great West.													
A. T. & S. Fe.													
E. J. & E.						1							
Through and special			2	33	1		28						
Total each grade	3		2	34	40	167		38	2				
Total spring wheat		2					283		2				

CORN.										
Railroad.	Yellow.		White.		2	3	4	No Grade.		
	2	3	2	3						
C. B. & Q.	746	409	124	178	1,378	875	321	48		
C. R. I. & P.	360	203	51	7	522	419	288	48		
Chicago & Alton.	620	46	162	9	441	16	85	7		
Illinois Central.	1,758	121	530	61	521	125	250	19		
Freeport Div. I. C.										
Galena Div. C. & N. W.	148	182	28	11	208	474	367	56		
Wis. Div. C. & N. W.	1	2								
Wabash.	276	47	165	24	126	38	38	10		
C. & E. I.	203	49	148	39	96	24	46	8		
C. M. & St. P.	56	80	5	4	372	230	308	19		
Wisconsin Central.										
Chicago & Great West.	12	7	1	1	44	113	82	14		
A. T. & S. Fe.	256	38	92	10	272	63	20	4		
E. J. & E.	74	45	7	7	509	275	295	105		
Through and special.	86	2	2	4	44	...	3	5		
Total each grade	4,596	1,231	1,315	355	4,533	2,652	2,103	343		
Total corn.								17,128		

Railroad.	OATS AND RYE.									
	OATS.					RYE.				
	White.			Wt C.*		No Grade.			No Grade.	
	1	2	3	1	2	2	3	4	5	6
C. B. & Q.	104	504	59	953						
C. R. I. & P.	40	377	4	821						
Chicago & Alton	25	78	38	243						
Illinois Central	159	391	93	630						
Freeport Div. I. C.										
Galena Div. C. & N. W.	100	416	66	464						
Wis. Div. C. & N. W.	21	108		17						
Wabash	18	57	36	218						
C. & E. I.	5	16	9	170						
C. M. & St. P.	271	665	53	311						
Wisconsin Central	1	11								
Chicago & Great West.	13	157	16	88						
A. T. & S. Fe.	11	70	9	276						
E. J. & E.	12	80	1	138						
Through and special	1	3	60	17						
Total each grade	781	2,963	441	4,346						
Total oats and rye										

* White Clipped.	BARLEY.									
Railroad.	BayBrewing.		2	3	4	5	No Grade.	Total No. Cars all Gr'n by Roads		
	3	3								
C. B. & Q.				3	1		1	5,996		
C. R. I. & P.				9	25	19	7	3,370		
Chicago & Alton.								1,861		
Illinois Central.				10	22	3		5,024		
Freeport Div. I. C.										
Galena Div. C. & N. W.		1		16	11	3	2	2,685		
Wis. Div. C. & N. W.				32	3	6	1	201		
Wabash								1,114		
C. & E. I.								1,039		
C. M. & St. P.				79	26	38	3	2,828		
Wisconsin Central								12		
Chicago & Great West.				5	4		1	569		
A. T. & S. Fe.				2	2			1,388		
E. J. & E.				3	7	4	1	1,629		
Through and special.				1				941		
Total each grade.			1	160	101	73	16	28,557		
Total barley.							351			
Total grain, cars.								28,557		

VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, Aug. 7, 1897, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, bu.	Oats, bu.	Rye, bu.	Barley, bu.
Albany		25,000	35,000		
Baltimore	1,332,000	633,000	83,000	52,000	
Boston	570,000	940,000	19,000		
Buffalo	622,000	1,112,000	726,000	51,000	215,000
do. afloat	3,225,000	8,858,000	1,882,000	223,000	10,000
Chicago		4,000	8,000		
do. afloat	79,000	12,000	12,000	30,000	13,000
Cincinnati	1,015,000	81,000	281,000	384,000	282,000
Duluth					
do. afloat	275,000	45,000	3,000		
Indianapolis	131,000	184,000	118,000	6,000	
Kansas City	43,000	15,000	13,000	41,000	75,000
do. afloat	6,482,000	37,000	160,000	1,000	6,000
Minneapolis	234,000	78,000	484,000	28,000	34,000
Montreal	705,000	1,210,000	1,113,000	497,000	59,000
New York					
do. afloat	7,000				
Oswego		61,000	17,000		33,000
Peoria		9,000	25,000		
Philadelphia	186,000	605,000	78,000		
St. Louis	349,000	71,000	16,000	6,000	
do. afloat	83,000				
Toledo					
do. afloat	630,000	320,000	91,000	100,000	
Toronto	38,000		18,000		3,000
On Canals	125,000	542,000	137,000	117,000	69,000
On Lakes	1,950,000	1,661,000	1,224,000	69,000	30,000
On Miss. River	52,000	8,000	10,000	24,000	
Total	17,650,000	16,511,000	6,551,000	1,632,000	831,000
Corresponding date 1896	46,429,000	12,188,000	6,915,000	1,626,000	639,000

GRAIN IN STORE AT OTHER POINTS.

In addition to the above there was in store, at the points named below, on the tenth day of the month, the following grain:

	Wheat, bu.	Corn, bu.	Oats, bu.	Rye, bu.	Barley, bu.
August 10, 1897	1,466,950	1,533,062	89,400		1,408
August 10, 1896	2,578,810	1,253,017	816,860		30,082

Flax in 1896, 21,984 bushels.

The grain included in the foregoing table was stored at the following points on August 10 (in bushels):

Erie, Pa.: In 1897, wheat, 95,000; corn, 160,330; oats, 50,000. In 1896, wheat, 126,592; corn, 284,50; oats, 3,750; flax, 21,984. Reported by D. Benson, Secretary Board of Trade.

Richmond, Va.: In 1897, wheat, 965; corn, 11,594; oats, 8,203. In 1896, wheat, 36,178; corn, 18,197; oats, 2,027. Reported by T. E. Swain, agent in charge of Richmond Elevator.

Newport News, Va.: In 1897, wheat, 102,900; corn, 698,190; oats, 6,760. In 1896, wheat, 17,655; corn, 291,000; oats, 483,435. Reported by W. S. Upshur, agent Chesapeake & Ohio Grain Elevator Co.

Ogdensburg, N. Y.: In 1897, wheat, 49,700; corn, 662,648; oats, 8,000. In 1896, wheat, 27,000; corn, 249,000; oats, 143,900. Reported by W. G. Westbrook, agent Ogdensburg Terminal Co.

Galveston, Tex.: In 1897, wheat, 322,766. In 1896, wheat, 241,165; corn, 410,320. Reported by J. J. Davis, Assistant Secretary Galveston Wharf Co.

Ft. William, Ont.: In 1897, wheat, 895,619; oats, 16,437; barley, 1,408. In 1896, wheat, 2,130,222; oats, 183,748; barley, 30,082. Reported by M. Sellers, agent Canadian Pacific Elevators.

RECEIPTS AND SHIPMENTS AT NEW ORLEANS.

The receipts and shipments of grain, etc., at New Orleans, La., during the month of July, as compared with the same period of the preceding year, were, according to Hy. H. Smith, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels	312,351	223,375	162,351	350,286
Corn, bushels	325,595	590,408	387,595	270,196
Oats, bushels	70,000	125,240	70,000	27,869
Rough Rice, sacks	1,544	21,045	19,198	43,942
Clean Rice, barrels	102	776	6,074	8,983

CROP REPORTS

[Readers will confer a favor by sending us reports each month of the acreage and condition of growing crops, the amount of grain and hay in farmers' hands and stocks in store, for publication in this department.]

VIRGINIA, Massie's Mills, Nelson Co., August 9.—The quality of our wheat is very good, and the yield is satisfactory. W. D. BERRY.

INDIANA, Bremen, Marshall Co., August 9.—Our wheat is turning out a good yield to the acre, and the quality is very good. W. F. SCHILT.

NORTH CAROLINA, Milton, Caswell Co., Aug. 3.—We are grinding new wheat right along, and find the quality to be very good. MILTON ROLLER MILL CO.

KENTUCKY, Maysville, Mason Co., Aug. 11.—Wheat is good and there is plenty of it. So far there has been no rush of farmers' selling. W. H. SAUVARY.

TENNESSEE, Manchester, Coffee Co., August 8.—Wheat is very fine in this part of the state. We are paying 75 cents per bushel, but farmers are holding it for better prices. AUG. GATHMANN.

PENNSYLVANIA, Huntingdon, Huntingdon Co., August 12.—We are pleased to be able to report that we have the finest wheat crop, in quantity as well as quality, that we have ever had in this section. B. F. ISENBURG.

INDIANA, Rochester, Fulton Co., August 5.—Wheat is good in quality, and the yield throughout the county is about 12 bushels per acre. Farmers are marketing very freely at present price, 75 cents per bushel. JAS. S. CHAPIN.

ONTARIO, Markham, York Co., July 29.—New wheat will be on the market in a few days. The prospects are good for a big crop and a good quality of wheat. Old wheat is selling at 71 cents per bushel. F. K. REESOR & SONS.

KANSAS, Moundridge, McPherson Co., August 7.—Wheat thrashing is in full blast, and some fields are averaging as high as 41 bushels per acre. Farmers are holding their wheat, expecting higher prices in the near future. A. T. KRUSE.

NORTH DAKOTA, Fairmount, Richland Co., Aug. 11.—In this section wheat will average 12 to 15 bushels per acre. Farmers are all cutting this week. There is very little old wheat here; most all out of farmers' hands. W. H. BLAKE & SON.

ONTARIO, Yarker, Addington Co., August 2.—The new crop of fall wheat is likely to be sprouted considerably on account of continued wet weather, but only a small quantity of fall wheat is raised in this section. Spring wheat bids fair to be a good crop. A. E. BANYARD.

BROOM CORN.—Tuscola, Douglas Co., Ill., August 2.—One of the largest crops of broom corn ever raised in this county is ready to be gathered. The principal fields are around Tuscola, Arcola and Humboldt. The acreage is large, the yield is good, and the corn is now in fine condition.

MICHIGAN, Athens, Calhoun Co., August 10.—Wheat in this section is all that could be asked for both in quality and yield. The average yield per acre will run close to 20 bushels per acre, if not more. Some wheat that was sown late and didn't have half a chance yielded 20 bushels per acre. E. H. WICKS.

OHIO, Kingston, Ross Co., August 7.—Wheat in this part of Ohio (Ross and Pickaway counties) is a splendid crop this year, and the yield is good, 18 to 40 bushels per acre. All shock wheat has been thrashed. About one-half of the crop was stacked, and is yet to be thrashed. It tests about 58 pounds per bushel, and is of good quality. CURTIS BOYCE.

OHIO, Marshallville, Wayne Co., Aug. 12.—Wheat is turning out good, averaging from 25 to 45 bushels per acre. Farmers are holding for better prices. Oats will be a medium crop. Corn is turning out better than expected. A large amount of timothy seed is harvested. Corn is selling at 25 to 30 cents per bushel, oats 18 cents, timothy seed at \$1 per bushel. IRA GRABER.

IOWA, Colo, Story Co., August 11.—About 60 per cent. of the corn crop will make a fair yield if frost holds off until September 10 or 15. The balance wants until October 1 to mature to make a fair crop. Under such circumstances the yield will be about 40 bushels per acre. Oats are yielding 35 to 60 bushels, quality fair. The wheat crop is light and of good quality. SHAW & BINDER.

IOWA, Conway, Taylor Co., August 12.—The acreage of oats is about 75 per cent. of an ordinary crop, and hardly 33 1-3 per cent. of a full crop. The best new oats I have taken in weighs 26 pounds per bushel, and it runs as low as 22 pounds. Corn that was planted early looks very well; late planted corn will make very little. It's too dry here for

either. Timothy seed is a good crop in this section. JERRY WILSON.

NEBRASKA, Beaver Crossing, Seward Co., August 5.—New wheat has just begun to come in. In this locality it is of very good quality, yielding from 10 to 45 bushels per acre. Most of the wheat grown here is winter wheat. About half of the farmers are thrashing out of the shock. Oats are making about half a crop. There is a fair crop of rye, and as we are getting a good rain to-day corn will make a good two-thirds of an average crop. J. E. TICE.

WASHINGTON, Pine City, Whitman Co., July 26.—We have the finest prospects for wheat, oats and barley I have ever known in this locality. Wheat will yield 20 to 50 bushels per acre, barley 40 to 60 bushels, oats 40 to 75 bushels. Harvest will commence in about three weeks. Farmers are in fine spirits. Everything points to an enormous yield and a fair price. Earlier in the season there was some uneasiness about grasshoppers, but they don't seem to be doing much damage now. A. J. SMITH.

ONTARIO, Mill Brook, Durham Co., July 31.—The crops of this district are very promising. Fall wheat was badly damaged in spring. Farmers plowed a lot of it up, which they will be sorry for, as what is left will be a fair crop. Spring wheat will be better than it has been for years. Hay, like fall wheat, was considerably plowed up. Farmers have been growling all summer of the failure, but now in harvesting what was not plowed up it is found to be a good crop—about twice as much as the farmers predicted. NICHOLAS WYATT.

ILLINOIS, Chatsworth, Livingston Co., August 10.—Our corn crop is looking very good, but is badly in need of rain; unless we get rain within a week it will be cut down 25 per cent. There is quite a large amount of old corn yet in farmers' hands. I would say 20 per cent. of the crop yet to be marketed. Farmers seem determined not to sell until they can realize about 30 cents per bushel for it. We have a very good oats crop, yielding about 45 bushels per acre and of good quality, but farmers are not marketing them very freely. MEENTS, SMITH & CLOKE.

SOUTH DAKOTA, Brookings, Brookings Co., August 12.—The wheat crop here is very deficient. I don't think the average yield for Brookings and Moody counties will be over 10 bushels per acre, and it will be of a very poor quality, mostly No. 3. The acreage is about 10 per cent. larger than in 1896. Oats are a good crop, the acreage 10 per cent. smaller than in 1896. Barley is a big crop, but the acreage was small and the quality of the grain poor. Flax is almost nothing; I don't think there is 10 per cent. of last year's crop. The corn crop is large, but there is a poor stand and it will take a month of warm weather to make a crop. W. D. ALLISON.

SPRING WHEAT.—With all due respect to a man who has been over the ground and is presumably competent to judge, we question Mr. Jones' judgment when he says that the Northwest is only going to be good for 140,000,000 bushels' crop, and that owing to depleted interior stocks there will be less wheat handled at Duluth and Minneapolis than during the year just closed. A large percentage of country correspondence received here indicates a much better than average crop, and it is going against fate to presume that country correspondence is wrong on the high side. An average crop on this year's acreage means at least 170,000,000 bushels, and a 10 per cent. better than average would mean 190,000,000 bushels. Based wholly on the feeling absorbed from country correspondence we should say that 180,000,000 bushels will be not far from a low estimate.—Commercial Record, Duluth.

OHIO.—The monthly report of the Ohio Department of Agriculture says: The following report presents the percentage condition of crops as compared with a fair average and is estimated from the returns received up to August 1 from the regular township crop correspondents of the Department, over one thousand correspondents being represented in the returns, which include every portion of the state: Wheat, 90; oats, 79; timothy, 87; potatoes, 59; tobacco, 83; pastures, 99. Average date of beginning wheat harvest, July 2; of oats, July 22; of barley, July 5; of rye, July 3. Correspondents in expressing themselves regarding the present wheat crop refer to it as "excellent," "very fine," "good," "better than was expected," etc. These expressions are quite general, applying to all portions of the state except a few of the northwest counties, where the wheat, as indicated in former reports, has not turned out so well as in other portions of the state. The favorable expressions on wheat seem to be warranted by the percentage estimate which indicates a crop for the state nearly up to an average. Prospect has steadily advanced from month to month until the harvest shows an estimated product of 90 per cent. of a full crop. The crop, as a rule, was safely harvested and is of good quality. The prospect for corn is considerably better than a month ago. It has made rapid growth under the

very favorable weather conditions, and with no backsets now a much better crop will result than was anticipated a few weeks ago. It is not so evenly distributed as could be desired, but there is a great preponderance of good over fair and poor corn at this time. Pastures are generally excellent. Oats are not so good owing to heavy rains and winds about harvest time. Much of the crop was down.

SPRING WHEAT.—Reports from South Dakota show that harvest is in full blast this week. Many have finished. By Saturday night, if the weather is favorable, most of the wheat will be cut. Wheat is going into stack very largely and will be thrashed as soon as possible, and will go on the market if present prices keep up. This locality reports that the outcome is disappointing and the actual yield is much poorer than expected. North Dakota reports that there is considerable late wheat that will very likely get caught with frost. This late wheat will not be fit to cut before September 1, and not then if the weather keeps cool. In Southern Minnesota spring wheat is practically all in shock. The weather lately has been very unfavorable on account of too much rain. The yield will not be as great within 20 per cent. of last year. This will be partly overcome by there being more acreage than the year before. The quality of the wheat will be varied from No. 1 down to rejected. Thrashing will commence in about 15 days. When thrashed it will mostly go on the market. There will be a good demand from all the country mills for No. 1 wheat, as they are mostly short for wheat to grind.—S. T. K. Prime, in Chicago Tribune, Aug. 14.

ILLINOIS.—The State Board of Agriculture has issued the following crop report for August: **CORN**.—The August 1 reports of crop correspondents made to the Department show an increase in area in this cereal of 2 per cent. over the area of 1896, giving a total area of 7,052,000 acres. In Northern Illinois the area is 3,192,000 acres; in Central Illinois, 2,831,000 acres, and in the southern division of the state 1,029,000 acres. Owing to the unfavorable spring corn was not planted until from two to four weeks later than usual, so that it is not up to quite an average condition for this date, but during July the weather was very favorable for its growth, and it has made up much of the time lost earlier in the season, having gained about 10 points since June 20. Unless injured by early frosts the 1897 crop of corn in Illinois promises to be a record breaker. **WHEAT**.—Of the area seeded to winter wheat last fall, 1,987,000 acres, over one-half, of 55 per cent. was destroyed and plowed up, leaving but 858,000 acres for harvest. The average yield per acre on the area harvested was 11 bushels, giving a crop of 9,767,000 bushels. The quality of the berry is generally very good and the yield was much better than was anticipated early in the season, when it was thought the crop would be the smallest ever harvested in the state. The average price obtained for wheat by the farmer August 1 was 67 cents per bushel, the highest market price since 1892.

MICHIGAN.—Lansing, August 7, 1897.—The average yield of wheat per acre, as estimated by correspondents this month, is for the state 13.81 bushels; southern counties, 14.85 bushels; central counties, 11.18 bushels, and northern counties, 13.05 bushels. Compared with the estimate of July 1 there is an increase in the state and southern counties of about one and one-half bushels, in the central of 0.88, and in the northern 0.65 bushel.

Comparatively little thrashing had been done when the reports were forwarded, but correspondents very generally report wheat turning out better than expected. A few exceptionally high yields are noted, but these at the most indicate no more than that a good crop has been harvested. A few such yields are always obtained in good wheat years. Actual thrashings of more than single jobs are reported as follows: Berrien County, 842 acres, yield 11,378 bushels, average per acre, 13.51 bushels. Branch County, 105 acres, yield 2,103 bushels, average per acre, 20.03 bushels. Cass County, 858 acres, yield 14,460 bushels, average per acre, 16.85 bushels. Van Buren County, 118 acres, yield 1,537 bushels, average per acre, 13.03 bushels. The crop has generally been secured in fine condition and is of good quality. The heavy rains in the central part of the state just at the close of harvest did some damage but it is not extensive. In a few fields the grain sprouted. In answer to question as to quality 342 correspondents in the southern counties report it good, 70 average, and 3 bad; in the central counties 86 report it good, 44 average, and 4 bad, and in the northern counties 43 report it good, 21 average and 1 bad. The number of bushels of wheat reported marketed in July is 665,294, as compared with 580,622 reported marketed in July, 1896, and the amount marketed in the twelve months, August-July, is 10,130,876 bushels, as compared with 9,250,104 bushels in the same months last year. The average condition of corn in state is 87, comparison being with average years. In the southern counties it is 86, central 90 and northern 88. Corn made rapid growth in July. July 1 the figures for the state and

southern and northern counties were 75. One year ago the average condition in the southern counties was 104. Oats are estimated to yield about 23 bushels per acre. This crop is not yet all secured, and the work has been somewhat delayed by rain. Potatoes promise about seven-tenths, and beans nine-tenths of an average crop. The yield per acre of clover and timothy hay is slightly more than in average years. Meadows and pastures are now in fine condition. The average condition of clover sowed this year is, in the state 91, southern counties 88, central 98 and northern 91. Apples now promise in the state about one-third, in the southern counties one-fourth, and in the central counties two-fifths of an average crop. WASHINGTON GARDNER, Secretary of State.

OHIO, Mad River, Clark Co., August 11.—Wheat is generally good in quality. The yield varies; some poor seed was sown, and yielded only 5 to 7 bushels; average yield 14 bushels. Farmers are not selling freely; possibly 10 per cent. has been marketed. Acreage of oats was small; not much marketed. Old corn is mostly all marketed. The growing crop is very uneven; there are some really good fields and some very poor ones. The stalk generally is very short and the stand poor. There was quite a lot of replanting, and it shows in the fields. The yield will probably be 75 per cent. of an average. Acreage about 85 per cent. This report covers the points of Enon, Yellow Springs and Donnelsville. The reason farmers are not marketing wheat more freely is that last year nearly all the wheat sprouted in the shock. This season as soon as the wheat was cut it was put in barns or stacked to save it. Generally the farmers thrash out of shock, but since they have their grain protected the market advanced sharply, and they are indifferent about thrashing, as they want to speculate. J. S. HARSII-MAN.

GOVERNMENT CROP REPORT, Washington, D. C., Aug. 10, 1897.—The August report of the Statistician of the Department of Agriculture shows the following average conditions on August 1: Corn, 84.2; spring wheat, 86.7; spring rye, 89.8; oats, 86; barley, 87.5; buckwheat, 94.9; tobacco, 78.7; Irish potatoes, 77.9. CORN.—The condition of corn, 84.2, is 1.3 points higher than last month, but 11.8 points lower than on August 1, 1896, and 3 points lower than the August average for the last ten years. The principal state averages are as follows: Ohio, 85; Michigan, 85; Indiana, 92; Illinois, 93; Iowa, 78; Missouri, 87; Kansas, 70 (a drop of 20 points during the month); Nebraska, 84; Texas, 83 (a decline of 18 points); Tennessee, 90; Kentucky, 92. SPRING WHEAT.—The condition of spring wheat, 86.7, is 4.5 points lower than last month, but 7.8 points higher than on August 1, 1896, and 4.5 points higher than the August average for the last ten years. There is a decline of 8 points in Minnesota, 11 in South Dakota, 5 in North Dakota, and 1 in Nebraska. SPRING RYE.—The average condition of spring rye is 89.8, as compared with 90 last month, 88 on Aug. 1, 1896, and 86.8 for the last ten years. OATS.—The average condition of oats is 86, as compared with 87.5 last month, and 77.3 on Aug. 1, 1896. The consolidated returns indicate that about ten per cent. of the oat crop of last year is still on hand. BARLEY.—The average condition of barley is 87.5, as against 88.5 on July 1, and 82.9 on Aug. 1, 1896. BUCKWHEAT.—The area in buckwheat is 4.8 per cent. less than last year, and the condition is 94.9, as compared with 96 at the corresponding period last year. POTATOES.—The average condition of potatoes has fallen during July from 87.8 to 77.9, which latter figure is 16.9 points lower than on Aug. 1, 1896. The condition of the rice crop of Louisiana is 84, of that of South Carolina 77, of Georgia 92.

KENTUCKY.—Lucas Moore, Commissioner of Agriculture for Kentucky, in his report for August, says: For the August report 136 correspondents, representing 99 counties, have replied. WHEAT.—Thrashing has been vigorously pushed during July, when the weather conditions would permit. In some sections where showers were frequent many farmers have stacked their crops, and where this is the case thrashing will be postponed for some time. The results, both as to quantity and quality, equal expectations to a surprising extent. Replies to question, "Has yield when thrashed equaled expectation?" resulted in 100 correspondents answering "yes" and but 11 answering "no." Many correspondents supplementing their replies with the statement, "yes, and away beyond." To the question as to quality 110 correspondents say it is "good" or "excellent," 5 say it is "an average," and not one considers it bad; 43 correspondents say the crop is being marketed freely as thrashed, while 73 say it is being held for higher prices. The interference with thrashing spoken of has resulted in no appreciable damage to the crop and the loss of time from frequent interruptions of work is about the extent of the damage done. The price for No. 2 wheat, about the date of August 1, averaged 66 cents per bushel. Last year, with a crop less than one-half of the amount of the present one, the price averaged 46 cents. The change in condition represents an improvement of nearly 300 per cent.

CORN.—The condition of the corn crop has improved during July from 87 per cent. on July 1 to 93 per cent. on August 1. This, in face of severe damage by drouth in sections, both in western and eastern portions of the state, which have been singularly deficient in rainfall during July. This is especially true of the counties of Warren, Hart, Logan, Daviess, Ohio, Meade and Trimble. Quite the reverse of this condition had prevailed in other sections and there the crop has suffered from excess of moisture and consequent lack of cultivation. On August 1, 1896, the corn crop showed a condition of 85. The crop has not entirely reached a normal state of development for the season and some apprehension of damage from frost is justly felt. The threatened damage from chinch bug has not occurred except in the dry districts. OATS.—The oat crop is short of straw as a rule, though the grain is generally good. Some damage by rain to the crop in shock is reported, especial mention of this is made in Todd County. Fleming County reports considerable damage by chinch bug. Thrashing has just begun and positive information as to yield was not ascertained. The acreage harvested as compared with the acreage of 1896 is 81, thereby showing the acreage seeded and the acreage harvested to be about the same. HEMP.—The general average condition of hemp is 79, which is a loss of 8 points during July. On August 1, 1896, the condition was 95. The condition varies widely in the several counties, which is all the more singular when we consider that the hemp growing district lies in one body and does not cover a great extent of territory. In Scott County the condition is reported 100, while the average for Woodford County is 50. MEADOWS.—The number of acres of timothy meadows cut as compared with 1896 is 90 per cent., and the yield similarly compared is 91 per cent. Rain interfered with harvesting, though no part of the crop is reported lost from this cause. The quality is below the average on account of weeds.

KANSAS.—F. D. Coburn, Secretary of the Kansas Department of Agriculture, writing under date of August 6, 1897, says: A report on the condition of growing crops in Kansas, July 31, together with estimates by its correspondents of the yields of wheat, rye, oats, barley, flax and hay, and these applied to acreages of each crop as returned by township assessors, is issued by the State Board of Agriculture to-day. The figures showing yields are a consensus of those made by farmers, thrashermen and millers in well nigh every neighborhood, each one being especially counseled to "make none but safe, conservative estimates," and are based on the entire acreage sown, instead of on acreage harvested. While the efforts to ascertain the facts as to yields, so early in the season, has been unusually painstaking, and it is believed the results obtained will closely correspond with those to be arrived at later when most of the thrashing has been done, it should be understood that the final canvass ninety days hence may give figures slightly greater or less. WINTER WHEAT.—The yield of winter wheat aggregates 49,502,087 bushels, or with two exceptions (1891 and 1892) the largest in the state's history. The yield per acre is 14.91 bushels on the 3,318,763 acres sown. Cowley, Osage and Woodson counties report the highest yields per acre—24 bushels. Twenty counties raised 20 bushels or more per acre. Sixty-eight counties produced 97 per cent. of the total, or 48,031,154 bushels. The counties were led by Sumner with the enormous output of 4,585,060 bushels, the largest crop ever produced by a Kansas county. Barton has 2,760,645, McPherson 2,392,938, Ellis 1,820,116, Saline 1,792,340, Rush 1,766,154, Ellsworth 1,621,749, Sedgwick 1,493,712, Rice 1,482,510, Cowley 1,461,408, Pawnee 1,399,128, Marion 1,374,403, Russell 1,289,821, Dickinson 1,186,178, Harvey 1,137,980, Harper 1,121,456 and Ottawa 1,014,426 bushels. One year ago four-fifths of the crop was described as "medium or below" in quality; this year it is reported "good" from every county by several of the correspondents and in some counties by a smaller number as "medium," while the occasional report of "poor" is so infrequent as to appear lonesome. The estimates indicate that 40 per cent. of the year's product will be marketed within 60 days, and that the acreage sown the coming fall will be at least an increase of 10 per cent. over last fall's sowing. The quantity of old wheat found on hand by the assessors in March was 1,604,798 bushels, as against 1,941,100 in March, 1896, and 3,672,083 bushels in 1895. SPRING WHEAT.—The land returned as sown to spring wheat is 125,601 acres and its yield 1,087,612 bushels—an average of 8.64 bushels per acre. The quality is medium and good. Rawlins, Sherman, Decatur, Cheyenne, Thomas, Norton and Sheridan, all northwestern counties, produce the bulk of this crop. RYE.—Acreage, 113,819; yield, 1,565,106 bushels; yield per acre, 13.75 bushels; quality, generally good. The largest product, 106,274 bushels, is in Decatur County. OATS.—Acreage, 983,355; yield, 25,151,379 bushels; yield per acre, 25.57 bushels. The area is 33.46 per cent., or 494,489 acres, less than in 1896, and the product 5,836,607 bushels, or 30.16 per cent., greater. The quality, with few exceptions, grades from medium to very good. The largest product,

106,580 bushels, is in Marion County, and the highest yields per acre in Republic (43) and Cowley (37). CORN.—In most parts of the state the promising corn prospects of a month ago have diminished daily, until in several counties they have been virtually destroyed, and in a large number of others irreparably injured by the intense heat and lack of sufficient rainfall. These conditions have been most severe in the central counties, near the southern border, including Kiowa, Pratt, Comanche, Barber, Kingman, Harper, Sedgwick and Sumner, while a somewhat corresponding area on the northern border has been favored above all. The average condition for the state is 60; in 44 counties it is higher; it is 50 or above in 73 counties, and 75 or above in 28 counties; in 8 it is 90 or above, thus: Geary and Pottawatomie 90, Clay 92, Riley 95, Smith 96, Cloud 98, Jewell 100 and Washington 103. In 20 counties it ranges from 30 down to 7 in Pratt and 5 in Kiowa. Much of the corn planted in many of the counties usually noted for large yields will not be worth saving even as fodder, and yet with favoring weather, presaged by widespread rains beginning and since August 3, the crop as a whole may be as great as the total produced by some other states in a decade. The total area planted is 8,293,819 acres, and the quantity of old corn on hand in March was 87,720,917 bushels, as compared with 57,627,421 bushels in 1896, and 14,434,250 bushels in 1895. BARLEY.—Acreage, 118,108; yield, 1,810,136 bushels; yield per acre, 15.32 bushels. The largest product, 189,342 bushels, is in Ness County. The next largest, 97,560 bushels, in Sheridan, 92,764 bushels in Thomas, and 92,360 bushels in Graham County. FLAX.—Acreage, 169,130; yield, 1,196,981 bushels; yield per acre, 7.08 bushels. Thirteen counties have more than 5,000 acres, Allen leading with 14,071 acres and a product of 98,497 bushels. The counties having the next largest product are Neosho, with 79,456, Coffey 77,560, and Bourbon 72,247 bushels. HAY.—Average yield of timothy, 1.25 tons per acre; clover, 1.86 tons; prairie hay, 1.03 tons. OTHER CROPS.—The condition of other crops is as follows: Broom corn, 74; castor-beans, 78; clover, 82; timothy, 75; alfalfa, 83; millet, 70; Kaffir corn, 75; milo maize, rice corn or Jerusalem corn, 75.

Items from Abroad

The Ministry of Agriculture of France recently issued a crop report which is considered to indicate a yield of wheat 10 to 11 million quarters below the 1896 crop.

France imported from Sept. 1, 1896, to June 30, 1897, 407,000 quarters of wheat and wheat flour (of 480 pounds each), against 1,304,000 quarters in the same period of 1895-96.

Argentina exported from January 1 to July 27, in quarters of 480 pounds each: Wheat, 212,500 quarters in 1897, 2,091,500 quarters in 1896, 4,405,500 quarters in 1895; corn, from May 1 to July 22, 32,000 quarters in 1897, 1,209,500 quarters in 1896, 1,042,000 quarters in 1895.

Russia exported from Aug. 1, 1896, to July 23, 1897, compared with the same time of the previous season: Wheat, 22,548,000 against 23,568,000 quarters (of 480 pounds each); barley, 9,152,000 against 9,758,000 quarters (of 400 pounds each); corn, from November 1 to July 23, 1,904,000 against 2,216,000 quarters (of 480 pounds each).

Holland imported during June 701,000 quarters of wheat (of 480 pounds each) and 77,000 sacks of flour; the exports included 568,000 quarters of wheat and 7,000 sacks of flour. The net importation of the two articles in the eleven months ending June was 1,470,000 quarters, against 2,053,000 quarters in the corresponding period last season.

It is reported that merchants of Rio de Janeiro, Brazil, have chartered two vessels at San Francisco to convey cargoes of California wheat to them. There are three flouring mills in Brazil which have hitherto drawn their supplies from Argentine and Uruguay; but those countries themselves are more likely to import than to export this season.

The Hungarian Minister of Agriculture has issued a report to the effect that the condition of crops is less unfavorable than has been supposed. The total yield is computed at 27,000,000 metric centals. This, however, is far below the average, and will leave almost no margin for export. A report from Vienna, August 10, says the unfavorable prospects have caused a rapid rise in prices.

Russia's crop for 1897 has been officially estimated at 28,025,000 quarters of spring wheat, 15,512,000 quarters of winter wheat, a total of 43,537,000 quarters (of 480 pounds each) for 65 governments. It is said that on account of the reduction in yield Russia will prohibit the exportation of grain this year. The final report on the crop of 1896 places the total yield at 49,756,000 quarters, in 1895 50,576,000 quarters. There has been a steady decrease since 1893.

ELEVATOR

GRAIN NEWS

An elevator may be erected at Flint, Mich.
 An elevator is being built at Oak Grove, Mich.
 A new elevator is being erected at Potter, Wis.
 An elevator has been erected at Wabash, Nebr.
 An elevator is to be erected at Canova, S. Dak.
 An elevator may soon be erected at Marion, S. Dak.
 An elevator is being erected at Farmington, N. Dak.

McCabe Bros. are building an elevator at Cavalier, N. Dak.

An elevator is being erected at Bern, Kans., for Mr. Hilt.

The new elevator at Hubbard, Nebr., is nearly completed.

J. W. Cochrane is building an elevator at Glenboro, Man.

Monte Vista, Colo., is to have a new elevator and also a mill.

R. C. Burroughs is building an elevator at Grassmere, Mich.

Charles Savage is building a grain elevator at Virginia, Ill.

The new Black Rock Elevator at Buffalo, N. Y., is completed.

Two new elevators are to be erected at New Philadelphia, Ohio.

Wormwood & Baker are building an elevator at Larned, Kans.

Walters, Nichols & Porter are erecting an elevator at Parnell, Ill.

Hanson & Sons are rebuilding their elevator at Latimer, Iowa.

The new Anchor Line Elevator at Erie, Pa., has been completed.

The Dominion Elevator Co. may erect an elevator at Carberry, Man.

Charles Wolohan has bought the elevator at Birch Run, Mich.

The Farmers' Elevator Co. has been organized at Mason City, Ill.

John Buchanan of Rio, Wis., may build an elevator at that place.

Frank Richert has completed his new rice mill at New Orleans, La.

M. M. Fowler has closed his elevator at Warner, S. Dak., for the season.

Miller Bros. are building a 25,000-bushel elevator at White Rock, S. Dak.

Chris. Meyer has purchased Schroeder & Fell's elevator at Peotone, Ill.

The Harley Grain Co. is completing its new elevator at Hartley, Iowa.

C. H. Sells has completed and is operating his new elevator at Pittwood, Ill.

A. Finch has purchased the business of the Goff Grain Co. at Goff, Kans.

Harris & Co.'s new elevator at Kenton, Ohio, is completed and in operation.

D. H. McMillan & Co. have purchased the Griffith Elevator at Emerson, Man.

S. F. Westcoat, dealer in grain and coal at Wilmington, Ohio, has assigned.

O. D. Green is building an addition to his grain warehouse at Ritzville, Wash.

J. C. Brackett has bought the grain business of Daniel Beede at Milton, Nebr.

An elevator may be erected at West Redding, Conn., by South Norwalk parties.

The O. W. Mitts Grain Co. is erecting an elevator and warehouse at Toledo, Ohio.

The firm of G. & J. P. Le Blond, grain dealers of Celina, Ohio, has been dissolved.

The new elevator of A. Rutledge at Le Roy, Ill., is completed and now in operation.

Johnson Bros. have bought and are operating W. J. Leake's elevator at Rippey, Iowa.

A steel elevator may be erected at Ft. William, Ont., by the Canadian Pacific Railway.

Watson & Frost have consolidated their grist milling business with their grain, feed and flour

business at Grand Rapids, Mich., and will hereafter conduct both as one business.

The Union City Roller Mill Co. will erect a \$10,000 grain elevator at Union City, Tenn.

Jay G. Dutton, dealer in grain and coal at Perry, Iowa, has discontinued his business.

Jules Cedelat has purchased the grain business of Field & Field at Leverett, Mass.

Isaak & Wolf are erecting a grain warehouse at Eureka, S. Dak., for handling grain.

Moses Bros., grain dealers of Great Bend, Kans., are building an elevator at Ellinwood.

Counselman & Co., grain merchants of Chicago, are erecting an elevator at Galt, Iowa.

W. H. Campbell has bought W. H. Hoskin's grain and stock business at Goldfield, Iowa.

An elevator is to be erected at Carberry, Man., to be completed in time for the fall trade.

Geo. A. Kimmel's new elevator at Wichita, Kans., has been completed and is in operation.

Jolly & Prunty have overhauled their elevator at Grayville, Ill., and have put on a tin roof.

Jas. S. Miller will erect a 50,000-bushel elevator and a flour mill at Miller's Station, Mo.

Hargreaves Bros., dealers in grain at Cullom, Ill., will build an addition to their elevator.

The Southern Illinois Milling Co. of Murphysboro, Ill., has erected an 80,000-bushel elevator.

The Commercial Club of Tekamah, Nebr., wants a grain merchant to locate in that town.

Livermore Bros. are building an elevator at Thompson, Iowa, which will cost over \$4,000.

J. A. Campbell & Son of Lincoln, Nebr., are erecting a 10,000-bushel elevator at Gothenburg.

A. G. Egolf is having a grain warehouse erected at Norristown, Pa., which will cost \$8,000.

A company of farmers has bought the elevator and mill of Foley Bros. at Cold Springs, Minn.

Brooks Bros., grain dealers of Minneapolis, Minn., are building an elevator at St. Thomas, N. Dak.

W. C. Graham of Portage la Prairie contemplates moving to Winnipeg to go into the grain trade.

McAdams & Moore, dealers in grain, etc., at Greenville, Texas, have succeeded Y. O. Adams.

Schuyler Wrigglesworth has put in a new engine to operate his elevator at East Cohoctah, Mich.

David Grubb is erecting an elevator at Shelbyville, Ind., where he will engage in the grain business.

A. Tanner has bought W. M. Jones' elevator at London, Ohio, and engaged in the grain business.

C. D. Francis, grain dealer of Spokane, Wash., is erecting a large grain warehouse at Waukon.

C. W. George has succeeded the firm of Smith & Verlaque, dealers in grain, etc., at San Diego, Cal.

B. S. Edwards is building an elevator at Chetopa, Kans., to be operated in connection with his mill.

H. A. Crossman has built a brick engine house in connection with his elevator at Needham, Mass.

C. K. Neveling of Wichita, Kans., is going to erect a 25,000-bushel elevator at Newton, to cost \$10,000.

Joyce & Streeter are improving their elevator at Memphis, Ind., and have added new machinery.

The Northern Grain Co. of Chicago is erecting an elevator at Eau Claire, Wis., which will cost \$5,000.

S. Stewart is erecting a 40,000-bushel elevator at Morris, Minn., to replace the one recently burned.

It is said that the Northwestern Elevator at Chicago, which was burned recently, will be rebuilt.

Charles Rippe has bought an elevator at Forest City, Iowa, where he has engaged in the grain business.

The old elevator at Waltz, Mich., is being raised and remodeled and will be occupied by a Toledo firm.

J. E. Brown is buying grain at Tiro, Ohio, occupying the new elevator recently erected at that place.

Klatt Bros., millers of Annandale, Minn., are contemplating the erection of an elevator at that place.

The Coyle Mercantile Co. of Guthrie, Okla., has leased and will operate the Snyder elevator at Edmond.

The Farmers' Elevator at Glenboro, Man., has been sold to J. E. Campbell of Carman, for \$4,700. The elevator at the same place formerly owned by Smith & Co. has been sold to the Northwest Ele-

vator Co. of Winnipeg, which is remodeling and enlarging its capacity to about 30,000 bushels.

The Macdonald Engineering Co. has the new 150,000-bushel elevator at Winfield, Kans., about completed.

Lane & Beaublossom are rebuilding their elevator at Havre, Iowa, which was destroyed by fire recently.

St. John Bros. have completed their new elevator at Lakefield, Minn., and are now erecting one at Alpha.

G. W. Van Dusen & Co. of Minneapolis have completed their new 25,000-bushel elevator at Columbia, S. Dak.

M. H. Hanson, dealer in grain, coal, etc., at Popejoy, Iowa, assigned recently to his brother, Hans Hanson.

The Dominion Elevator Co. of Winnipeg has been granted a federal charter with a capitalization of \$200,000.

The grain firm of Smith & Parker has purchased an interest in J. T. Gelsthorp's elevator at Midland City, Ill.

E. A. Warner has leased the K. C. & O. Elevator at York, Nebr., where he will engage in the grain business.

H. H. Haines, one of the lessees of the new Santa Fe elevator at Winfield, Kans., has opened offices in that city.

F. P. Rush & Co. have completed their new elevator at Farmer City, Ill. W. G. Lindsey is the manager.

J. W. Read has let the contract for the erection of an elevator at Pana, Ill., work to commence September 1.

The Middle Division Elevator Co. has completed its new elevator at Heyworth, Ill., which is now in operation.

The Northern Elevator Co. has bought James White's new elevator, recently completed at Brandon, Man.

T. C. Shepherd of Bloomington, Ill., has established a grain office at Birkbeck, where he will buy grain.

Smith Bros., grain dealers of Mt. Sterling, Ohio, have overhauled their elevator and put in new machinery.

B. T. Railsback, grain dealer of Hopedale, Ill., has purchased the elevator owned by Quigg, Railsback & Co.

The Western Elevator Co. of Western, Nebr., is building an addition to its plant and will put in a corn sheller.

H. H. Steele, grain dealer of Golden City, Mo., is preparing to erect an elevator at Lockwood or Golden City.

A. W. Steere is erecting a building at Greenville, R. I., in which he will conduct a grain and hay business.

Judd & Judd have succeeded to the grain business of Chauncey Donald, dealer in grain and feed at Bethel, Conn.

The Winona Elevator Co. has completed its new elevator at Columbia, S. Dak. It has a capacity of 25,000 bushels.

Shearer & Shearer, grain dealers of Cullom, Ill., intend to enlarge their elevator by the addition of a large oats bin.

It is said that seven outside firms are figuring on building grain houses in Eureka, S. Dak., in the near future.

Johnson & Gott's elevator at Pawnee, Ind., has been remodeled and enlarged and new machinery has been put in.

C. W. Moon & Sons have completed their new elevator at Lakeville, Ind. A gasoline engine will furnish the power.

George Pumphrey and William Staley have leased an elevator at Waynesville, Ill., and will engage in the grain business.

The Lake of the Woods Milling Company has commenced the erection of new elevators at McGregor and Bagot.

The Moulton-Starrett Co. of Chicago has been awarded the contract for the erection of the Louisville & Nashville Railroad elevator at Pensacola, Fla.

Raymond & Co. have decided to build a storehouse of 150,000 bushels' capacity next to their elevator at the foot of Genesee Street, Buffalo, N. Y. The new storehouse will have modern facilities for

the reception of grain. The new building will be completed about September 15.

Weideman & Mullett, millers of McClure, Ohio, are erecting an elevator to be operated in connection with their mill.

The Garrison Mill & Elevator Co. is building a large elevator at Hooper, Colo., which will be completed next month.

The Dodge Mfg. Co. recently shipped a large amount of machinery to go in the Armour Elevator "C" at Chicago, Ill.

Bartlett & Co. have leased John Coe's elevator at Ancona, Ill., for two years. Mr. Hill of Dana will buy grain for the firm.

T. C. Ramsey has opened a large warehouse at South Delta, Pa., where he has engaged in the grain and fertilizer business.

The Holmquist Grain & Lumber Co. has leased the Barlow elevator at Tekamah, Nebr., where it will carry on business.

The Farmers' Elevator Co. of Winnebago City, Minn., which failed recently, announces that creditors will be paid in full.

Henderson & Ingold, grain dealers of Spencer, Iowa, have dissolved partnership, and P. M. Ingold is continuing the business.

Henry C. Spellmeyer has bought the interest of William Bucholtz in the firm of Bucholtz Bros., grain dealers of Paxton, Ill.

Tate, Mueller & Co., grain merchants of Baltimore, Md., have leased and are operating the City Elevator at Frederick, Md.

Hans Peterson will build a 12,000-bushel elevator at Evansville, Minn., power for which will be supplied by a gasoline engine.

M. C. Tubbs, grain dealer of Kinsley, Kans., is improving his elevator, putting in a dump, etc., and will add a gasoline engine.

A. H. McIntyre of Ransom, Ill., has engaged in the grain business at Worthington, Minn., in partnership with H. N. Douglas.

J. K. Davidson & Co., grain commission merchants of Kansas City, Mo., have leased Bushby & Smith's elevator at Parsons, Kans.

W. P. Salladay has overhauled and repaired his elevator at Ashville, Ohio, and put in a new wheat cleaner and other machinery.

Leo Pickard of Champaign, Ill., has leased an elevator at Farmer City, where he will engage in the grain and other business.

Geo. D. Hill of Streator, Ill., has bought A. K. Knapp's elevator at Grand Ridge, where he has engaged in the grain business.

Edgar B. Bartram has purchased and is conducting O. M. Slater's grain, provision and grocery business at Bridgeport, Conn.

The transfer elevator at Sheldon, Ill., has been closed and will be overhauled and increased in size by the erection of an addition.

Harry C. Reed has succeeded Jas. A. Seaver as agent of the Chicago grain firm of Bartlett, Frazier & Co. at Kansas City, Mo.

John Dick has purchased the Watson Elevator at Newton, Kan., and will erect a mill in connection with which it will be operated.

The firm of Johnson & Thieroli has been organized at Solomon Rapids, Kans., to carry on the grain business of C. J. Johnson.

H. Puterbaugh of Mackinaw, Ill., has bought Mr. Knickerson's grain business at Lilly, where Harry Jefferson is buying grain for him.

R. F. Cummings, grain dealer of Clinton, Ill., has purchased an elevator at Loda, and now operates five elevators at different points.

The M. & N. Elevator at Garfield, Minn., which has been closed for some time, is now in operation, with August Sanstead in charge.

T. L. Carroll, dealer in grain, etc., at Gothenburg, Nebr., is erecting an elevator at that place in expectation of an increased business.

Bernard Gallagher of Beattie, Kans., has purchased the Brunswig Elevator at Mina, where he has engaged in the grain business.

The Rev. Mr. York is erecting an elevator at Allendorf, Iowa, a new town near Sibley, where he will engage in the grain business.

S. D. Viets, dealer in grain, etc., at Springfield, Mass., has bought the W. S. Arms Co.'s grain business, which he will conduct in connection with his own.

The Waukesha Grain & Produce Co. of Waukesha, Wis., has been reorganized, S. A. Fox, the former president, selling his interest to Mr. Smart, the senior member of the company. Frank Brimmer,

who has been in the employ of the company, has purchased an interest and will take active part in carrying on the business.

C. W. Tracy, formerly connected with the Pacific Coast Elevator Co., has engaged in the grain business by himself at Portland, Ore.

Burns & Walton, grain dealers of Howell, Mich., are remodeling the old D. & M. elevator at Owosso, and will operate it on the new crop.

The Hamilton-Rourke Co.'s new grain warehouse at Mission, Ore., which takes the place of the one burned recently, has been completed.

H. Mueller & Co., grain dealers of Chicago, Ill., have received a permit to erect an elevator and feed house at 5511 Stewart Avenue.

The Crown Elevator Co.'s elevator at Granite Falls, Minn., has been overhauled and repaired and is now operated by Bogle and Stone.

The Hamilton Grain Co. has been organized at Hamilton, Tenn., by Chas. F. Hood and H. H. Hood, to carry on a grain and feed business.

The Farmers' Elevator Co. of Cook, Nebr., has been completed and the farmers will carry on the grain business on the cooperative plan.

Wilkinson & Bro., grain dealers of Knightstown, Ind., have placed a good-sized order with Nordyke & Marmon Co. for elevator machinery.

O. B. Tilton of Lowell, Mass., has bought S. D. Chandler's grain business and elevator at Nashua, N. H., and will continue the business.

The Globe Elevator Co. of Superior, Wis., has decided to do its own switching, and will purchase a locomotive to be used for that purpose.

N. N. Turner of Harvard, Ill., has removed to Rock Rapids, Iowa, where he will engage in the grain and stock business with his brother.

The Indianola Cotton Oil Co. has been organized at Indianola, Miss., to erect a cottonseed oil mill and manufacture products of cottonseed.

The W. D. Orthwein Grain Co. of St. Louis, Mo., has established an office at Kansas City, and is represented at that point by Jas. E. Seaver.

J. S. Metcalf & Co. of Chicago are completing the 500,000-bushel elevator they are building for the Cleveland Elevator Co. at Cleveland, Ohio.

Jordan Bros., grain dealers of Heyworth, Ill., report a rush of business at that place. In three days recently they bought 110,000 bushels of grain.

William McKinney of Scircleville, Ind., has purchased a half interest in the elevator at Kirklint, where he has engaged in the grain business.

The Turner-Hudnut Co. of Pekin, Ill., has put in a pneumatic conveyor to convey grain from barge to its elevator at Pekin, a distance of 100 feet.

C. J. Alderson, grain dealer of Williams, Iowa, has leased Finch's elevator at Galt. He will remodel the house and buy grain at that place.

The Williamston Oil & Fertilizer Co. of Williamston, S. C., intends to increase the capacity of its mill one-third and make other improvements.

The Kansas City Grain Co.'s new elevator at Hutchinson, Kans., which takes the place of the one destroyed by fire a few weeks ago, is completed.

Evans & Beckord, grain dealers of Waco, Nebr., have dissolved partnership. Robert Beckord will continue the business, dealing in grain and coal.

McCaull & Webster, grain dealers of Sioux Falls, S. Dak., are tearing down their old elevator at that place and will erect a new modern structure.

The Oregon & Washington Flour Co. of Portland, Ore., has entered into the business of handling grain and feed in addition to its other business.

The elevator at Fernandina, Fla., is being overhauled preparatory for fall business. A new foundation will be put in and other repairs made.

The Interstate Grain Co. is making extensive improvements in its elevators at Centerville, S. Dak., preparatory to doing a large business this season.

G. I. Ragsdale and others have organized a stock company for the purpose of erecting a cottonseed oil mill of 25 tons' capacity at Hazlehurst, Miss.

The Marion Milling & Grain Co. has been incorporated at Marion, Ohio, with a capital stock of \$25,000. Henry Strelitz is president of the company.

George Nicholson & Co., grain dealers of Henry, Ill., have purchased the Henry Elevator Co.'s plant, and the firm now operates all three elevators in the town.

S. T. James writes us that he has severed his connection with the firm of Curyea Bros. & Co. of Alvo, Nebr., and has leased Counselman & Co.'s elevator at that place, which he will operate on his own account. Mr. James is an experienced grain

man, and is a member of the Nebraska Grain Dealers' Association, at present serving on the Governing Committee of that organization.

A company has been organized to build a 60-ton cottonseed oil mill at Pine Bluff, Ark., to cost \$60,000. D. W. Wright, Little Rock, Ark., is president.

Allmendinger & Schneider, millers of Ann Arbor, Mich., have torn down a portion of the Garrison elevator at Vernon, and will erect it at some other point.

Bartlett, Frazier & Co. of Chicago are building an extension to their elevator at Leonore, Ill., on the prospect of handling more grain there than ever before.

Smith & Conklin, grain dealers of Minden, Nebr., have purchased the elevator of W. A. Minnix at Holstein. E. S. Minnix will buy grain for the new owners.

Work is progressing rapidly on the Missouri Pacific Elevator at Coffeyville, Kans. The contract for elevating machinery was awarded to the Weller Mfg. Co.

George Knudson, late owner of the Brookings Roller Mill, will erect a large elevator at Brookings, S. Dak., where he will engage in the grain business.

A. D. Thomson & Co., grain merchants of Duluth, Minn., have purchased eleven country elevators in Iowa on the line of the Sioux City & Northern Railroad.

A. Saigeon, grain dealer at Kingston, Mich., has put in a new engine and boiler. He is also making preparations for dealing in feed, and will put in a feed mill.

Frank Windiate, dealer in grain, flour and feed at Paulding, Ohio, has completed the erection of a new elevator and expects to increase his business materially.

Leverge Thomas & Bro. of Hemlock, Mich., have bought an elevator at that place and have given it a thorough overhauling in readiness for handling new wheat.

Nye, Jenks & Co., grain dealers of Minneapolis, Minn., who operate elevators in Wisconsin and other states, have opened a branch of their business at Milwaukee.

Gifford & Manly, grain dealers of Sioux Rapids, Iowa, are overhauling their warehouse in preparation for fall business. They will probably erect an elevator soon.

Geo. R. Lamb & Co.'s elevator at Dryden, Mich., which was burned recently, is to be rebuilt. The P. O. & N. Railroad donated \$500 for the erection of the house.

The Northwestern Elevator Co. is reported to be about to build an elevator at Thrall, Iowa, to be operated by Stephens Bros., dealers in grain, etc., at that place.

The National Rice Milling Co. has placed a large order with the Nordyke & Marmon Co. for special rice milling machinery to be installed in its mill in New York City.

The Mandan Mercantile Co. of Mandan, N. Dak., is erecting a 12,000-bushel elevator at Glen Ulen. A full line of machinery will be put in, including a gasoline engine.

The Electric Elevator Co. has awarded its contract for a complete outfit of elevating machinery for its new grain elevator at Buffalo, N. Y., to the Dodge Mfg. Co.

The elevator of the Dickens Warehouse Co., an organization of farmers, at Spencer, Iowa, was recently sold at auction, and was purchased by A. A. Flint of Spencer.

The Burlington Elevator Co. of Peoria, Ill., has let the contract to the Barnett & Record Co. for a 500,000-bushel elevator at Peoria. It is to be completed in 70 days.

The Argentine Elevator Co. has leased buildings near Argentine, Kans., which that new company will use for the storage of grain in connection with its elevator business.

It is reported that Van R. St. John has sold out his interest in the grain business at Wapella, Ill., and will buy grain for the Middle Division Elevator Co. at that place.

The Deposit Milling Co. has been incorporated at Deposit, N. Y., with a capital stock of \$3,000, to deal in grain, feed and flour. The incorporators are C. R. Smith, E. F. Smith and Anderson Lovejoy.

W. D. Judd, grain merchant of St. Louis, Mo., has bought the old Capital Elevator at Topeka, Kans., which had been closed and in the hands of a receiver for nearly a year. The elevator has been cleaned and repaired and is now in operation. It has a capacity of 275,000 bushels. J. J. O'Rourke

of St. Louis has been appointed superintendent of the elevator, and Hanson Gregg, grain dealer of Kansas City, is manager.

The Macdonald Engineering Co. has completed the 750,000-bushel elevator at Galveston, Tex., erected for the Star Flour Mills, and machinery is now being put in.

C. E. Burns, grain dealer of Howell, Mich., recently bought two Olds Gas Engines, one for the elevator at Whitmore Lake and the other for the elevator at Owosso.

Edwin Mezger & Co., grain dealers of Dwight, Ill., have purchased Kime's elevator at Campus. E. L. Marvin will remain in charge of the elevator for the new owners.

S. Sherman & Son, millers of Poultney, Vt., have completed the erection of their grain elevator and are erecting a coal elevator, and they will deal in grain, flour, coal, etc.

The Macdonald Engineering Co. of Chicago has just completed the foundation for the Electric Elevator at Buffalo, N. Y., and the steel superstructure is now being put up.

Samuel Squire & Co. have completed their grain storehouse at Westfield, Mass., and are now dealing in grain, hay, etc. The firm is composed of Samuel Squire and W. G. Davis.

The firm of Butler & Wheeler, grain dealers of Pulaski, Mich., has been dissolved, Warner Wheeler buying Mr. Butler's interest in the elevator, which he will operate himself.

The Farmers' Grain Co. has leased Hageman's grain warehouse at Elliott, Ill., is erecting an office, will put in a set of Fairbanks scales, and will engage in the grain business.

The new elevator under course of erection at Carberry, by the Northern Elevator Co. of Winnipeg, Man., is about completed. The building will have a capacity of 25,000 bushels.

An association, known as the "Each Farmers' Grain Company," has been organized to purchase grain at Easton, Teheran and Boggs, Ill. Eighty farmers are connected with it.

Potter & Co., grain dealers of Athol, Mass., are dealing in coal in connection with their grain business, and in order to extend their trade they intend to erect an elevator, sheds, etc.

Samuel Born & Co. are building a new 100,000-bushel grain elevator at Lafayette, Ind. The contract for complete equipment of machinery was awarded to the Weller Mfg. Co.

The Kildare Elevator Co. has been incorporated at Kildare, Okla., with a capital stock of \$6,000. The directors are J. Rauch of New Ponca and I. J. Poley and B. J. Rauch of Kildare.

K. K. Liquin, grain dealer of Dysart, Iowa, is erecting an elevator at Elheron, Iowa. It will have a capacity of 20,000 bushels and will be fitted with a full line of modern machinery.

The Manitoba Grain Co. of Winnipeg is erecting an elevator at Letellier. The same company will also erect a handling and storage elevator at Emerson, to handle exports via Duluth.

The Northern Grain Co. of Chicago has let the contract to the Barnett & Record Co. for a line of 10 country elevators, to be erected along the Chicago & Northwestern Railway in Iowa.

Henry Shearman has leased the Hartstorn Elevator at Penn Yan, N. Y., and will continue the business formerly conducted by John Conklin & Son, dealing in grain, fertilizers, etc.

A. B. Cohee & Co., grain dealers of Brimhurst, Ind., who recently completed their new elevator, write us that they are having the best business in their experience in the grain trade.

Sneath & Cunningham, dealers in grain, seeds, etc., at Tiffin, Ohio, have leased the B. & O. elevator at Siam, which had been closed for some time. A. H. Eaton is manager of the house.

Carrington, Hannah & Co., grain merchants of Chicago, are about to erect an elevator at Manteno, Ill. Warren Mann of Rockville has been engaged to represent the company at that point.

W. H. Carey & Co. are making extensive improvements to their elevator at Bad Axe, Mich., including a new stone foundation under the building and an addition. The capacity of the elevator will be increased.

The Rex Milling Co. is erecting a steel grain storage elevator near its mill in Toad-a-Loup, Kansas City, Kans., which will have a capacity of 250,000 bushels. This will be the first steel elevator in Kansas City.

B. C. Taylor of Mankato, Minn., has been appointed receiver for the Madelia Farmers' Warehouse Co. Many of the farmers have not been paid for wheat stored in the elevator which this company operated. The mortgage on the building has

been foreclosed and bid in by the directors. It is reported that the liabilities amount to about \$14,000 and assets \$5,000.

H. B. Merrill has leased the Santa Fe elevator at Solomon, Kans., which has been closed for some years. Mr. Merrill has made the necessary repairs and has engaged in the grain business.

Paul Hagen has purchased the interest of his partner, George Shultz, in the firm of Hagen & Shultz, grain dealers at Fortville, Ind., and will continue the business in his own name.

The Montreal Transportation Co. purposes to erect an elevator at Kingston, Ont., which will have a capacity of 1,000,000 bushels, with elevating capacity of 30,000 bushels of grain per hour.

The Phillipsburg Grain Co. has been organized at Phillipsburg, Kans., by A. W. and L. A. Champlin. The company has leased the Beckley elevator, which it has placed in charge of Irving Eldred.

L. T. Hutchins & Co., grain dealers of Sheldon, Ill., have awarded their contract to the Weller Mfg. Co. for complete outfit of grain elevating machinery for a new elevator at Donovan, Ill.

The American Glucose Co. is working on a 500,000-bushel elevator at Peoria, Ill., which will consist of five steel tanks each with a capacity of 100,000 bushels, inclosed in a fireproof building.

T. L. Bone & Co. are completing improvements to their elevator at Bethany, Ill., rebuilding the dump, putting a new foundation under the elevator and increasing the capacity by 6,000 bushels.

The Farmers' Elevator Co. has been organized at Morris, Minn., and is remodeling Louis Thoele's warehouse into an elevator. Mr. Thoele has been engaged as grain buyer for the company.

J. M. Wallace of Salem, Oreg., has completed his new 55,000-bushel elevator at Sidney. It has an elevating capacity of 1,000 bushels per hour, and is equipped with all the necessary machinery.

It is reported that the Grenell Seed Company of Saginaw, Mich., is negotiating for the old Wells-Stone elevator at that place, and that if it secures it the company will handle all kinds of grain.

R. F. Cummings will erect an addition to his elevator at Chebanse, Ill. It will be 16x24 and 38 feet high, with a cupola 12 feet high. It will have patent dumps and all necessary machinery.

Fred. H. Hurd has purchased Charles E. Downie's grain and feed business at Seattle, Wash. Mr. Downie has gone to Klondike, where he hopes to find gold more plentiful than in the grain business.

Thos. L. Hughes, dealer in grain, etc., and L. C. Edwards, grocer, of Bartow, Fla., have consolidated their businesses, which they will operate in partnership under the firm name of Hughes & Edwards.

H. L. Barfield, dealer in grain, hay, feed, etc., at Macon, Ga., has removed to 464-66 Second Street, where he will occupy one of the largest stores in the city. His brother, R. E. Barfield, is associated with him in business.

Carl Jessen of Red Wing, S. Dak., and W. F. Lang of Aberdeen have formed a partnership and purchased Moomaw & Harrington's elevator at Northville, S. Dak., where they will engage in the grain, coal and lumber business.

The Henry Harrison Co. has been incorporated at Brockport, N. Y., to deal in grain and other farm products, with a capital stock of \$8,000. The incorporators are Henry Harrison, Florence L. Harrison and James H. Smith.

Frank Olson and J. K. Bremyer have been received as partners of the firm of Barker & Blackman. The new company has leased the People's Elevator, which it is operating under the firm name of Barker, Bramyer & Olson.

At a recent annual meeting the Cokato Elevator Co. of Cokato, Minn., elected the following officers: President and treasurer, S. J. Swanson; secretary, G. P. Olson; manager, John Nygren. It declared a dividend of 60 per cent.

The Turner-Hudnut Grain Co. of Pekin, Ill., intends to increase its facilities for handling grain at Bloomington. An addition consisting of two steel tanks, each with a capacity of 35,000 bushels of corn, will be erected to the company's elevator at that place.

The firm of Edwin Chick & Co., dealers in grain, feed, lime, seeds, etc., at Bangor, Me., has been dissolved. Whitney & Cameron purchased the grain and feed business of the firm, the R. B. Dunning & Co. taking over the lime, cement and seed department.

Several farmers of Byron, S. Dak., recently organized a company to erect an elevator and carry on the grain business, but when they applied for a site on the Great Northern Railroad at Byron upon which to build, the railroad company refused to give it to them. The farmers promptly filed com-

plaint with the Warehouse and Railroad Commissioners. The commissioners served notice on the railroad to permit the erection of the elevator, and the railroad has agreed to enter into a contract for a 15,000-bushel house.

The Barnett & Record Co. of Minneapolis has been awarded the contract for the erection of E. Mooers & Co.'s elevator at Kingston, Ont. Work on the erection of the house is now under way. It will have a capacity of 500,000 bushels.

The Northwestern Elevator Co. is putting its elevators and other buildings on the Great Northern R. R. between Benson, Minn., and Huron, S. Dak., in perfect repair and otherwise arranging for a large grain shipping business this season.

The firm of Darter, Ashby & Hulett, doing a grain business at New Market, Ind., has been dissolved, Mr. Ashby and Mr. Hulett retiring. Mr. W. M. Darter will continue the business. Mr. Darter is one of the oldest grain dealers in the county.

Farmers have formed a stock company and are erecting an elevator between Perth and Argonia, Sumner Co., Kans. The house will have a capacity of 45,000 bushels, and the farmers will use it to store their grain and hold for better prices.

W. H. S. Penberthy and Herman Kreger are erecting an elevator at Clear Lake, S. Dak. It will have a capacity of 15,000 bushels, and the firm will have a feed mill, and will handle coal, etc., power for the whole plant being supplied by a gasoline engine.

The Pennsylvania Warehousing & Safe Deposit Co. is erecting a large warehouse at Philadelphia. The grain elevator and warehouse heretofore operated by the Tradesmen's Elevator Co. will be operated by the Pennsylvania Warehousing Co. as a part of its plant.

The Weller Mfg. Co. is furnishing the machinery for the new steel grain storage plant being erected by the R. P. Moore Milling Co. at Princeton, Ind. It also furnished elevating machinery for the large elevator at Coffeyville, Kans., which Seeley, Son & Co. have remodeled.

The Farmington Grain & Hay Company has been incorporated at Minneapolis, Minn., with a capital stock of \$10,000. C. W. Webber and G. Fred Kletzin of Minneapolis and N. S. Becker of Castle Rock are the incorporators. The company will operate an elevator at Farmington.

The grain elevator at Augusta, Ga., has been overhauled and improved in the expectation of an increased business this season. The storage capacity of the elevator is 200,000 bushels. It has a receiving capacity of 5,000 bushels per hour and a delivery capacity of the same quantity.

The Independent Elevator Co. of Duluth, Minn., has obtained possession of 20 elevators at points in Northwestern Minnesota and North Dakota. The officers of the company are: H. H. Kenkel, president; Albert Todd, vice-president, and W. J. Bettin-gen, secretary and treasurer.

The grain firm of L. T. Hutchins & Co. of Sheldon, Ill., is building a new elevator at Donovan, which will have a capacity of over 50,000 bushels. It is expected to have it ready for operation by September 1. The firm was also compelled to build a large addition to its elevator at Milford on account of the increase in business at that place.

M. F. Reilly & Co., grain dealers of Kankakee, Ill., are remodeling and improving their elevator at that place. Another cupola has been built and new machinery put in, power being supplied by a Webster Gas Engine. When completed the elevator will have five dumps, which will increase the handling capacity to 25,000 bushels per day.

The Heidenreich Construction Co. is overhauling elevators "A" and "B" of the Calumet Grain and Elevator Co. (Fisk, Bennet & Co.), at Ninety-fifth Street and the B. & O. tracks, South Chicago, and making improvements that will cost about \$15,000. New clippers are being added and new machinery is being put in throughout. Belts will displace the old screw conveyors.

The South Carolina & Georgia Railroad is remodeling a rice mill in Charleston, S. C., and converting it into a grain elevator, with a capacity of 200,000 bushels of wheat. It will have a handling capacity of 10,000 bushels per hour. The South Carolina & Georgia and its connections, the Georgia and the Louisville & Nashville, are preparing to export grain next fall by way of Atlanta and Charleston. The elevator will be ready to receive grain by September 1.

T. T. W. Bready, grain merchant of Winnipeg, has entered into a partnership with Love & Tryon, bankers and general merchants of Grenfell, Man., for the purpose of dealing in grain. Bready, Love & Tryon will have headquarters in Winnipeg. They will begin at once the establishment of 16 elevators in Manitoba and the Northwest Territories, and the work of construction is to be pushed forward rapidly in order to be ready for the new crop. So

far the following have been decided on as points for building: Moose Jaw, Sintaluta, Wolseley and Grenfell.

W. A. Wheeler and Sylvester Pike have succeeded to the business of the firm of Wheeler & Co., dealers in grain and feed at Bridgeport, Conn. E. E. Wheeler has retired from the business, which will be continued under the same firm name.

Jas. Stewart & Co. have completed the erection of Elevator "B" at Galveston, Tex., for the Galveston Wharf Co., and C. F. Orthwein & Sons of St. Louis have leased the house. The Orthweins expect to export a great deal of grain through Galveston this season. They charter their own ships and practically route their grain through from the grain fields to the European markets.

The Washburn Elevator at Washburn, Wis., operated by Nye, Jenks & Co., has been thoroughly overhauled and improved; a new office has been built, an incandescent lighting plant installed, and considerable new machinery put in, including oat clippers. Over \$5,000 was spent in the work. Provision has been made for pneumatic sweeping of the elevator, the sweepings serving as fuel.

W. D. Gregory of the Midway Elevator Co., Minneapolis, Minn., has formed a partnership in his grain business with W. J. Jennison, the firm name being Gregory, Jennison & Co. The firm will operate the Midway elevators, do a receiving and shipping business, and will have a branch house in Duluth in charge of J. H. Cook. W. Q. Townsend has charge of the firm's commission business.

COMMISSION

Herman A. Wernli has opened a grain brokerage office at Le Mars, Ia.

D. C. Van Duyn of Lincoln, Nebr., has opened a grain broker's office at Champaign, Ill.

Walter Ogden of Quincy, Ill., has opened a grain commission house for Schwartz, Dupee & Co. at Joplin, Mo.

The Cassidy-Buell Co. has been organized at Quincy, Ill., to carry on a grain commission business, succeeding the Buell & Baker Commission Co.

The San Francisco Commission Co. has been organized at San Francisco, Cal., where it has engaged in the business of buying and selling wheat, stocks, etc.

The Holloway Seed, Grain and Commission Co. has been incorporated at Austin, Tex., with a capital stock of \$2,000, by C. W. Parker, Thomas James and B. T. Barry.

The Bates County Elevator Co. has engaged in the grain receiving and shipping business at Kansas City, Mo., making a specialty of handling wheat direct from country points.

H. W. Rogers & Bro., grain and seed commission merchants of Chicago, have bought Wood & Topliff's elevators at Gibson City and Harpster, Ill. W. C. Green is the local agent of the Chicago firm.

The Munday-Settlemyre Grain Co. has been incorporated at Litchfield, Ill., to transact a general grain commission business. The incorporators are Charles B. Munday, George L. Settlemyre and S. L. Cratty.

The Richardson Co. has been incorporated at Chicago, Ill., to carry on a grain commission business. The capital stock is \$50,000, and the incorporators are D. E. Richardson, Joseph G. Snyder and John M. Cameron.

The T. McCord Co. has been incorporated at Minneapolis, Minn., with a capital stock of \$25,000, to carry on a grain and elevator business. The incorporators are T. McCord, W. C. McCord and L. A. Countryman.

McDougal & Velde, grain commission merchants of Peoria, Ill., have dissolved partnership. Henry Velde will continue the business, while Edward McDougal will take a position in P. D. Armour's grain department in Chicago.

The Matthaues Schnaible Grain Co. is the name of a new corporation formed for the purpose of conducting a general grain business at Indianapolis, Ind. The incorporators are Matt. Schnaible, John F. Schnaible and John Sattler. Mr. Schnaible will be the general manager.

Rieker & Lippert have engaged in the grain commission business at Cincinnati, Ohio. The members of the firm are Wm. Rieker and Joseph J. Lippert. Mr. Rieker is the senior member of the firm of Wm. Rieker & Co., well known in the trade in the city, and Mr. Lippert has been for some years with the firm of Joseph Good & Son. He was also with the founder of that firm, Joseph Good, when the style was Jos. Good & Co. It is understood that the business conducted by Mr. Rieker will be sold out, and

that the other members will retire from the business, while William Rieker will enter the new combination.

G. A. Swan of Alden, Minn., has entered into partnership with W. A. Freemire, who has been connected with the grain receiving business in Minneapolis, Minn., for several years. The firm's name will be Freemire & Swan. Mr. Swan has been in the grain business for the past 16 years.

The firm of W. D. Gregory & Co., grain commission merchants of Minneapolis, Minn., has been reorganized, the firm name now being Gregory, Jennison & Co. J. H. Cook, of the Duluth Board of Trade Clearing House Association, is now associated with the company, and will have charge of the Duluth end of the business.

The firm of J. M. Hamilton & Co. has been incorporated at Chicago, with a capital stock of \$10,000, to carry on a grain commission business. The incorporators are M. J. Hamilton, Jos. E. White and T. D. Hurley. Mr. Hamilton was formerly in the employ of the Chicago commission house of Earle Bros. The company will have a branch at Creston, Ill., under the name of Hamilton, White & Rowe, A. W. Rowe of Creston being the other partner.

August W. Reed, of the firm of A. W. Reed & Co., grain and flour commission merchants, Baltimore, Md., has filed a bill in the Circuit Court against Wm. E. Baitzell, a former partner. The partnership was formed in 1887 and continued until December, 1895, when a new firm was organized by the admission of John F. Nelker. Mr. Reed believes that Mr. Baitzell's settlement was not correct, and brings suit to compel him to make a new accounting.

The grain and hay commission firm of Ellis & Flemming has been organized and commenced business at Cincinnati, Ohio. J. W. Ellis, the senior member of the firm, has been in the grain and hay business for many years. He was formerly with the old firm of Peck & Woolscroft, and later with Woolscroft & Co. He had charge of the hay trade of that firm for a long time, and then took a position with the firm of Whitcomb & Root in the same capacity. The other member of the firm, F. B. Flemming, has been with Woolscroft & Co. and the J. N. Woolscroft Company for some years.

The firm of W. B. McCardell & Co., hay, grain and general commission merchants of Baltimore, Md., has been dissolved, George Whitelock and Benjamin B. Shreeves being appointed receivers to wind up the business. Walter B. McCardell, a member of the firm, filed a bill of complaint against William H. Whiteford, his partner. The bill states that the firm began business August 1, 1895, and that its operations have been profitable, but that such irreconcilable differences have arisen between the partners as to render it necessary to dissolve the partnership. Mr. Whiteford, in his answer, admitted the statements in the bill to be true, and consented to the receivership.

Myrtill Blum, the broker who disappeared last September leaving a number of creditors to mourn his departure, has been located. For nearly a year the business associates and friends of the young commission man have been in ignorance of his whereabouts, and many among them thought that he had made away with himself on account of being unable to make good certain sums of money that passed through his hands and for which he gave no accounting. Blum did not commit suicide as was thought, but sought the more congenial clime of the South, and is now located in the City of Mexico. The reason for his sudden departure, which created quite a stir in business circles, was hypothecating a consignment of grain and converting the money to his own use.—Chronicle, San Francisco, Cal.

OUR CALLERS

We have received calls from the following gentlemen prominently connected with the grain and elevator interests, during the month:

S. N. Dodd, Toledo, Iowa.
D. N. Dunlap, Fontanelle, Iowa.
G. M. Robinson, of the Charter Gas Co., Sterling, Ill.
C. R. De La Matyr, of Seeley, Son & Co., Fremont, Nebr.
F. M. Andrews, of Andrews Bros., Dubuque, Iowa.
B. F. Ryer, secretary Huntley Mfg. Co., Silver Creek, N. Y.
W. H. Chambers, secretary G. D. N. A., Des Moines, Iowa.
J. L. Wheeler, representative of the Invincible Grain Cleaner Co., Silver Creek, N. Y.

Canada's new tariff exacts a duty of 7 cents on corn imported for distilling purposes, while for other purposes it can be imported free. This seems to be a tariff for revenue only.

PERSONAL

Wm. P. Dixon has been appointed grain inspector at Kankakee, Ill.

Jas. M. Garland of Decatur, Ill., has been appointed grain inspector at that point by Governor Tanner.

W. F. Thompson of Wichita, Kans., has succeeded H. M. Hickman as assistant grain inspector of Wellington, Kans.

H. E. Reed, who has had charge of the Central Elevator at Forest City, Iowa, has resigned and gone to South Dakota.

Harry C. Reed has been appointed the Kansas City agent of Bartlett, Frazier & Co., grain merchants of Chicago.

I. E. Haviland, superintendent of the Wabash Elevator at Toledo, Ohio, has resigned his position and gone East to enter a new field.

J. H. Bumgardner, an old-time grain man of Covell, Ill., has removed to Normal, where he has engaged in the grain and grocery business.

E. W. Smith, formerly a partner of J. K. Davidson in the elevator and grain business at Kansas City, Mo., has permanently retired from the grain trade.

J. E. Robinson, who was formerly grain inspector for the St. Louis Merchants' Exchange, has taken charge of the Mobile & Ohio R. R. Co.'s elevator at Mobile, Ala.

Chas. S. Murfin, grain man of Ithaca, Ill., and Miss Lizzie C. Allen were married July 21. Mr. and Mrs. Murfin went on a short wedding trip and are now at home at Ithaca.

Jas. A. Seaver has resigned the Kansas City agency of Bartlett, Frazier & Co. of Chicago, and has taken charge of the Capital elevator at Topeka, Kans., for W. D. Judd of St. Louis.

A. C. Clausen, chief grain inspector of Minnesota, has been reelected to the same office by the unanimous vote of the Railroad and Warehouse Commissioners. He will hold the office for a term of two years.

Arthur Hecker has been appointed chief grain inspector at East St. Louis under the new inspection law of Illinois. It will be Mr. Hecker's endeavor to conduct his department in a fair and impartial manner.

Edward Grassmuck, who was connected with the grain inspection department of the St. Louis Merchants' Exchange, has been engaged by the C. F. Orthwein Grain Co. to take charge of the elevator it is operating at Galveston, Tex.

W. H. Reed, of the firm of Reed & Co., grain merchants of Tacoma, Wash., has been appointed by Governor Rogers to serve on the State Grain Commission for the next two years. Mr. Reed has been a member of the Commission since its inception.

The youngest mayor in the country is Ernest H. Thompson, chief magistrate and grain merchant of Hepler, Kans. Mr. Thompson studied law, but engaged in the grain and lumber business at Hepler with his father. He is now the manager of the business. He is 22 years old.

OBITUARY

J. H. Kelly, dealer in grain, etc., at Lewiston, N. Y., died recently.

J. C. Meloy, grain dealer of Hastings, Minn., died July 18, aged 73. Mr. Meloy was a pioneer citizen of Hastings, and had been mayor of that city.

Colin Robinson, who was at one time engaged in the grain business at Bloomington, Ill., died at his home at Hyde Park, Chicago, July 17, aged 82 years.

Albert Simmons, of the firm of Simmons Bros., dealers in grain, etc., at Plymouth, Mass., died July 29. Mr. Simmons had been a member of the firm of Simmons Bros. for 25 years.

William Dorsett, formerly a well-known commission merchant of Chicago, but who retired from active business in 1877, died at his home in Chicago, July 14. Mr. Dorsett came to Chicago from the East in 1834.

John B. Lovington of East St. Louis, Ill., died at his home at that place July 31, aged 50 years. Mr. Lovington was born in Germany, but came to America at an early age. He made his home at St. Louis, engaged with a lumber merchant as clerk and acquired the business some years later. He also became interested in the grain business and was vice-president of the East St. Louis Elevator Co. for some years. From 1867 to 1869 he was mayor of East St. Louis.



Tester Bros. have engaged in the hay, straw and feed business at Napoleon, Ohio.

Jas. H. Day, Jr., dealer in hay, feed, etc., has opened a branch store at Old Saybrook, Conn.

J. R. Lucas has succeeded the firm of E. C. Lucas & Son, wholesale dealers in hay at Creston, Ind.

The whole secret of success in the hay business has been divulged. It is this: Get marketable hay to market.

Sanders McSparren, of the firm of Griest & McSparren, dealers in hay, feed, etc., at Philadelphia, Pa., died recently.

The railroads provide cars for hay, why not warehouses and other facilities for handling it, as they do for other freight?

While the commission business is necessarily largely based on confidence, this wouldn't justify a shipper in being a confidence man.

Hay men should never pile their bales on the bare ground. If there is any dampness in the ground the bales at the bottom will be damaged.

The firm of Bowne & Ferris, dealers in hay, feed, etc., at West Chester, N. Y., has been dissolved, and Mr. Bowne will continue the business.

Some people seem to think that hay can be handled like logs. This is far from being true. Cleanliness should be an important consideration in baling, loading and shipping hay.

Richard A. O'Brien of St. Hyacinth, Que., dealer in hay and grain, disappeared some time ago, and search for him has proved fruitless. He left several creditors for small amounts.

To facilitate the rapid movement of hay at destination shippers should, when possible, load cars with only one grade, and with that at the doors fairly representative of the whole.

The natural perversity which pessimists find in things inanimate is illustrated by the fact that poor hay is easy to get but hard to sell, while good hay is hard to get and easy to sell.

If shippers could ship their hay only over roads which had facilities for its accommodation, how quickly the other roads would come forward with their warehouses and scales! With railroads there is nothing more salutary than a little competition.

There may be glory in furnishing the market with timothy cut when in full bloom, says the National Stockman, but there is rarely any profit from the extra effort and risk. In the long run, just as attractive and a more profitable lot of hay may be put upon the market when the bloom is shed.

About five months ago an Englishman named F. J. Fowler appeared at Cincinnati, Ohio, and began a hay and grain commission business under the firm name of F. J. Fowler & Co. About a month ago he left Cincinnati without paying for several cars of hay that were sent to him by outside shippers, and also without leaving his address. A committee of the Chamber of Commerce appointed to look into the matter decided to report that he had been guilty of unmercantile conduct.

The hay crop of Newfoundland is especially good this year. The Montreal Trade Bulletin of August 6 says: At this time of the year there is generally an inquiry for hay from Newfoundland; and shipments are made later. This year, however, we are informed by a merchant who has lately returned from Newfoundland that there is the best crop of hay in that island that has been experienced for years, and that No. 1 is selling there at \$12. He also says that he does not expect to receive any orders for hay for Newfoundland this year, unless prices at Montreal are lower than at present.

"These country shippers who insist on patronizing all the new commission houses that spring up here are deserving of but little sympathy when they get caught," remarked a well-known receiver of Cincinnati recently. "Now here is a man in Illinois who sent a carload of hay straight to F. J. Fowler & Co. He has been shipping hay to Cincinnati for ten or fifteen years, and has had dealings with nearly all the prominent local dealers. He invariably sent his draft ahead of the hay. Yet the first stranger who writes to him for business gets it, and more than that, gets him to ship straight. He would not think of trusting one of the old firms that

far. Yet he promptly accedes to the request of the new firm, and, of course, loses his money. People seem to like to be swindled."

Leavitt, Sanborn & Co., hay commission merchants of Boston, Mass., warn shippers not to ship poor hay to their market. "There is no money to be made in poor goods," they say, very frankly. Leavitt, Sanborn & Co. thus make a specialty of getting good hay and getting good prices for it. Shippers should be thankful for such hints and should heed them.

The government crop report issued August 1 gives the following report on the hay crop: The total area of the hay crop is 1.9 per cent, less than last year. New York, Pennsylvania, Ohio, Michigan, Indiana and Wisconsin show a slight increase, but this is more than offset by the decrease in Illinois, Iowa, Missouri, Kansas, Nebraska, the two Dakotas and California. The average condition of pastures is very high, an average exceeding or closely approaching 100 being reported from three-fourths of the states.

This ought to be the banner year for the National Hay Association. Its greatest work has been but commenced; and while Rome was not built in a day, neither was it built without very hard work. The association is doing well, but we believe it can do better just as long as the trade suffers from lack of proper warehouse and terminal facilities; while the cars supplied by the railroads are too small for the established minimum weight; while freight rates on hay are as much more than on grain as at present, and while car service is inadequate and demurrage charges one-sided. If any or all of these reforms are to be accomplished there must be thorough organization and aggressive action.

The tragic movements of a farmer who has sold his product on a rising market would be rather entertaining were it not for the fact that somebody loses by it. The Montreal Trade Bulletin calls it "want of honor in business," and relates this instance: A farmer sold 20 tons of baled hay to a dealer here, and finding that the market was advancing immediately called upon another party and agreed to deliver him the 20 tons he had already sold at 25 cents per ton above the price of the first sale. And this is said to be a common occurrence on a rising market. In the mind of the farmer this is a great coup de finance; he takes no risks and gets all the advantages. But some day he will sign a contract, and that will be the last of his tricks.

The province of Quebec, Canada, usually produces a surplus of 300,000 to 400,000 tons of hay. There is a shortage this year, however, the Montreal Trade Bulletin estimating the yield at half an average crop. But, says that journal, assuming it will only be half a crop, with a duty of \$4 per ton precluding it from being exported to the United States, and with a large yield in Ontario, the question arises, What shall we do with a reduced surplus? The only outlet at present seems to be Great Britain, and a few lots of old hay are being shipped there from this port, the compressed hay being forwarded meeting with quite a success; but it has to be bought at very reasonable prices, and any advance, it is feared, would cut off this only outlet for our surplus supplies.

"It's well enough to talk," said a hay shipper recently, "but I use only two wires on my bales, and I think that is all there should be. The bale of hay is merely a temporary package for more convenient handling and shipping; it's not supposed to be a crate." Yes, but "for more convenient handling and shipping," as the shipper said, a third wire should be used. It is like the fifth wheel of an army wagon, very convenient if one of the others breaks. A visit to any of the larger markets or consuming centers, says a contemporary, would easily convince the most skeptical shipper that three-wired hay was the most desirable, because of the greater strength and protection. On two-wired hay, if one wire breaks the bale is destroyed and the hay wasted or sold for what it will bring to get rid of it, while the third wire prevents the bale bursting open entirely.

Whether or not hay ignites spontaneously has never been fully determined. Usually the fire has originated where considerable quantities of clover hay have been stored, and in nearly every case the stacks or buildings were entirely consumed, so it was impossible to determine the origin of the fire. At the Pennsylvania experiment station barns, in 1895, fire was seen dropping from the ceiling of the cow stable. Investigation proved that the fire was confined to a mow of hay 18x23 and about 23 feet high. The drafts were stopped and the top of the mow kept covered with wet blankets. Openings were made in the sides of the barn and all the hay, about 30 tons, was pitched out. While removing this, the entire center of the mow was smoldering and ready to burst into flames when exposed to the air. All the center of the mow was thoroughly packed, hot and smoking. The high temperature of the hay made it decidedly uncomfortable for those who were removing the smoldering fodder. The holes burned

through the mow floor were over the middle of the stable, and not near the walls. It is evident that the fire could not have been either accidental or incendiary. The hay was second growth clover and timothy, mostly clover, and when harvested was thought to be in unusually fine condition. The fact that it was very compact gave color to the theory that the combustion was spontaneous. Examination of the hay after being thrown out of the barn showed that a large proportion of it was so thoroughly charred that it would crumble when handled. Some of it had not been subjected to so great a heat and was only brown in color, but was wholly unfit for stock. For several days previous to the fire a peculiar odor had been noticed about the barn, and examination seemed to indicate that the rowen was heating, but there was no indication of fire. This odor soon became so strong that it was compared by some to that of burning grain. While positive proof as to the origin of this fire may be lacking, the circumstances are such that it is safe to consider it spontaneous.

HAY IMPORTS EXCEED EXPORTS.

According to the last report of the Bureau of Statistics hay amounting to 5,521 tons, valued at \$47,202, was imported in June, against 20,791 tons, valued at \$206,152, imported in June, 1896; and during the year ending June 30, imports were 119,942 tons, valued at \$1,030,497, against 302,652 tons, valued at \$2,773,535, imported in the same time of 1895-96.

Of imported hay none was exported in June, 1897, or 1896; 114 tons, valued at \$1,525, being exported in the year ending June 30, 1897, against none in the previous year. Of domestic hay we exported 5,662 tons, valued at \$79,744, in June, against 5,094 tons in June, 1896; and in the year ending June 30, exports were 61,658 tons, valued at \$845,590, against 59,052 tons, valued at \$874,048, exported in the year ending June 30, 1896.

CHICAGO HAY RECEIVERS ORGANIZE.

Chicago has a local hay association at last. The hay dealers of Chicago have long needed an association to look after their interests, for the protection of themselves and the shippers with whom they do business. Now and then irresponsible dealers have swindled shippers by receiving consignments of hay for which they would not remit. This happens in all markets, and is only avoided by having a local association for mutual protection.

This and other evils of the trade has led to the organization of the Chicago Hay Receivers' Association. An attempt will also be made to curtail and systematize the credit business. The Association will endeavor to keep its members posted as to the financial standing of the men to whom they sell, and the members will enter into a mutual agreement as to the amount of money they will allow shippers to draw on consignments. The officers are: George S. Bridge, of T. D. Randall & Co., president; Harry H. Fisher, of E. W. Fisher & Son, vice-president; R. H. Peterson, secretary. Directors: S. T. Edwards, chairman, W. R. Mumford, C. A. Davies. The Association's office is at 508 Rialto Building, Chicago.

UNIFORM GRADES; FREIGHT RATES.

In a recent circular letter E. A. Grubbs, grain and hay broker of Greenville, Ohio, gives some good advice to shippers in calling attention to the annual meeting of the National Hay Association. We extract the following:

"We have uniform grades in the cities, and what is needed now is uniform grading in the country. As I see it, the way to get uniform grading is to buy of the farmer by grade at a stated price for No. 1 and No. 2 Timothy, etc. Don't buy a farmer's crop by what can be seen on the outside or top. Buy by grade, the same as you have to sell. The way to accomplish this is by dealers in certain localities getting together and establishing rules, and then living up to them. By doing this there will be less desire to try to work off a lower grade on a sale for a better grade. I know how hard it is to throw up a lot of hay that does not open up as you expect. Many pressers will take hay they should not take, thinking it may go through, and often get the worst of it, as it doesn't always pass.

"The rate question has been discussed at every meeting. The railroads are condemned for charging too high a rate, and not having jumbo cars to accommodate the shipper who has had an old press or a shyster (I am not selling presses) that cannot bale tight enough to put 10 tons in a circus tent. I am heartily in favor of low rates, but there are two sides to this question. My experience has been that too many of us try to do a hay business on wind. We purchase an old press and buy a crop of hay, go to the agent and tell him we want a large car to load hay in immediately. He has none in the yard. We are compelled to load anything for want of a place to store. My idea is, first have a hay house where different grades can be kept separate; get a good press even if it is a little expensive, then give your agent time enough to get

a large car, and you will have less complaint against the railroad company and commission merchant.

"I am frequently asked by grain men whether it will pay to handle hay. Grain and hay work nicely together, and the day is not far distant when a majority of the grain dealers will be shippers of hay also."

REVIEW OF CHICAGO HAY MARKET.

The prices for hay ruling in the Chicago market during the last four weeks, according to the Trade Bulletin, were as follows:

During the week ending July 17 receipts of hay were 4,115 tons, against 2,794 tons the previous week. Shipments for the week were 256 tons, against 263 tons for the previous week. The market for old Timothy Hay ruled steady during the past week. Offerings small and demand good. Receipts of new gradually increasing and nearly all the arrivals were in heating condition. The demand was light and market very dull, buyers giving the old hay the preference. Prices declined \$1.00@1.50 per ton. New Kansas Prairie Hay was in large supply and only moderate. Prices ruled weak and declined about 50 cents per ton, and the market closed at inside figures. Old Iowa Prairie Hay was extremely dull. Scarcely any demand and the supply was liberal.

During the week ending July 24 receipts were 3,142 tons; shipments, 162 tons. A very dull market was experienced. While the arrivals were only moderate the offerings were large, for the reason that the demand was so extremely light that the hay accumulated on the tracks, and receivers were unable to dispose of consignments. Prices for new Timothy declined about \$1 per ton, and ruled comparatively steady for old. New Prairie declined about 50 cents per ton, and old Prairie not wanted. Sales of Choice Timothy ranged at \$8.00@10.50—outside for old.

During the week ending July 31 receipts were 4,596 tons; shipments, 192 tons. Only a light business was transacted in this market. The arrivals of old Timothy Hay were small and the inquiry was good. A firm feeling prevailed. New Timothy was in liberal supply and the demand was light. The market ruled dull and prices weak. Upland Prairie was dull and demoralized. Receipts of new large, and the demand was exceedingly light. Only a few cars of strictly choice could be sold, and the bulk of the arrivals accumulated on the tracks. Poor old grades not wanted and about unsalable. Sales of Choice Timothy ranged at \$8.50@10.50—outside for old; No. 2, \$8.00@10.00; No. 3, \$7.75; not graded, \$5.00@9.00; Choice Prairie, \$7.00@8.00; No. 1, \$6.00; No. 2, \$5.00@5.75; No. 3, \$4.50. Rye straw sold at \$7.00@8.00, and oat straw at \$4.00.

During the week ending August 7, receipts were 3,471 tons; shipments, 157 tons.—The offerings of strictly choice, sound Timothy—either new or old—were quite small, and a good local inquiry existed. A steady to firm feeling prevailed, with no material change in prices. Low and medium grades and heating Timothy were in liberal supply and very dull. Prices ruled irregular, depending on the quality and condition. The arrivals of new Prairie Hay show a falling off and choice grades met with a fair demand at steady prices. Low grades very dull. No demand for old Prairie Hay. Sales of Choice Timothy ranged at \$8.50@10.50—outside for old; No. 1, \$7.00@9.50; not graded, \$5.00@8.50; No. Grade, \$5.00; Choice Prairie, \$7.00@8.00; No. 1, \$6.50@7.50; No. 2, \$5.00@5.50; No. 3, \$4.00@5.00; No. 4, \$4.00. Rye straw very dull; sold at \$5.50@7.00—closing at inside.

PRICES AT DULUTH AND LONDON.

The following statement made by the Minnesota Railroad and Warehouse Commission shows the market value of No. 1 Northern Wheat at Duluth on July 26, 1897, as compared with actual sale of 8,000 bushels Duluth No. 1 Northern Wheat, on same day at Liverpool for delivery in London "c. i. f." (cost, freight and insurance):

	Cents.
July 26 Duluth quotation for No. 1 Northern...	78.75
Duluth elevator and inspection charges.....	.85
Lake freight and insurance, Duluth to Buffalo. 1.40	
Elevator charges and commission at Buffalo...	1.00
Canal freight and insurance, Buffalo to New York	2.50
Elevator charges, etc., New York, viz.: Demurrage, towing, transferring and trimming....	2.00
Ocean freight and insurance, New York to London	6.65
Shrinkage in weight, Duluth to London.....	.50

Cost in London, "c. i. f.".....93.65
 July 26 sold in Liverpool for London delivery 1,000 quarters (8,000 bushels) Duluth No. 1 Northern Wheat at 30 shillings per quarter (480 pounds), or 90 cents per bushel.....90.00

Difference 3.65

Showing that on that day the market in London was about 3½ cents below that of Duluth.

NEW COMPANY TO CONTROL ST. LOUIS ELEVATORS.

The receivership of the old United Elevator Co. of St. Louis, Mo., has been brought to a close, and the Consolidated Elevator Co. has assumed control of the property. At a meeting held August 2, J. B. M. Kehlor was elected president, Henry S. Potter vice-president, Charles A. Cunningham secretary and Webb M. Samuel general manager and superintendent. The capital stock of the company was increased to \$1,000,000, and the company issued \$1,000,000 of first mortgage bonds.

J. B. M. Kehlor, the new president, is known in commercial circles as the "millionaire miller." He is a member of Kehlor Bros., flour manufacturers. Mr. Samuel is one of the best-known men on 'Change, and at one time was president of the United Elevator Company. He is an old and experienced grain man, and is well qualified to fill the position.

The Consolidated Elevator Co. will control ten grain elevators, three being in East St. Louis. The United Elevator Co., which has now passed into history, was in its time one of the largest institutions of St. Louis. About two years ago an immense shortage in wheat was discovered, followed a short while later by a discovery of a shortage in corn. The company became embarrassed, and bonds to the amount of \$485,000 were issued. They were taken by stockholders to tide the corporation over its troubles. Business failed to get better, and the company went into the hands of a receiver. There was an almost endless chain of litigation on account of the diversified interests of the first and second mortgage bondholders, the stockholders and parties with liens on the properties, but after several months of difficult work and hard figuring the reorganization committee evolved a plan which met with satisfaction, and the Consolidated Elevator Co. was formed.

THE MARKETS

[We will be pleased to publish under this head short reviews of the conditions ruling in the different markets. Copy must reach us by the morning of the 14th of each month.]

Grain report of Jos. V. Ferguson & Co., New Orleans, La., August 11, 1897. HAY—Our market during the past week ruled steady and unchanged. Receipts continue rather light, but consist mostly of an inferior quality of new mixed timothy for which there is practically no sale except at buyers' figures. Choice and No. 1 Timothy, in light quarter bales, are particularly scarce, and sell readily at full prices on arrival. We quote our market as follows: Choice to Fancy, \$15.00; Strict Prime or No. 1, \$13.00@14.00; Good Prime \$11.50@12.00; Ordinary, \$10.00@11.00; Clover, Mixed, \$10.00. OATS—Receipts are moderate but the market is ruling slow and easy. We quote: Choice Mixed (sacked), 25½ cents; No. 2, 25 cents. New Texas arriving in good condition and plentiful. Selling 22@23 cents. CORN—Receipts continue only fair but the demand is yet slow. We quote: Choice White (sacked), 36@37 cents; Yellow, 36 cents; Mixed, 35 cents. WHEAT BRAN—Finner and advancing, fair demand, sells at 52@53 cents.

Grain report of Collins & Co., Cincinnati, Ohio, August 13.—The grain markets the past week have begun to show evidences of improved business conditions. Wheat has advanced beyond all expectations and is the surprise of the trade, yet while they recognize and credit to a large extent the poor condition of the European crops, the advance in values has been so rapid, the wide difference between the relative values of wheat with all other grain is so great, that they have not confidence in the advance in prices being maintained. Corn, oats and rye are beginning to show more strength, being too low in comparison with wheat values. With the resumption of manufacturing plants that have been idle for a long period, the present cheapness of these grains will no doubt cause a more active inquiry, and some improvement in prices. Present conditions are very favorable from all indications, of consignments enhancing in value while in transit. WHEAT—The receipts are very small, and under an enlarged inquiry the market rules firm and higher, and full prices were obtained for the limited offerings. No. Red at 85½@86 cents, No. 3 Red at 81@83 cents. CORN—The strength in wheat is having its influence on corn, and the undertone of the market rules firmer, with buyers more anxious for the few arrivals. No. 2 White at 29½@30 cents, No. 3 White at 28@28½ cents, No. 2 Yellow at 28½@29 cents, No. 2 Mixed at 28@28½ cents, No. 3 Mixed and Yellow at 27@28 cents. EAR CORN—Steady and in fair request. Choice Yellow at 28@29 cents, Mixed and White at 27@28 cents, as to quality. OATS—Liberal receipts of the new crop have ruled throughout the week, the quality of the arrivals have not been as good as was generally anticipated, being light in weight, stained or mixed with either wheat or rye. The demand ruling here, however, is active for all kinds, with the better qualities being taken for local feeding account, and the cheaper off grades in good request at low prices for shipping account. New No. 2 White at 20½@21 cents, No. 3 White at 18@19 cents, No. 2 Mixed at 17½@18 cents, No. 3 Mixed at 16½ cents, Rejected, hot and musty, at 15½@16 cents for Mixed, and 16½@17 cents for White. RYE—Firm and higher in sympathy with the advance in wheat. The arrivals are very small. No. 2 is fairly quotable at 44@45 cents. HAY—Old Timothy of the better qualities continues to meet a good inquiry with the arrivals small. Choice at \$11.00@11.25, No. 1 at \$10.25@10.75. The new crop is in fair condition in most sections, and will admit of shipping. The demand for Choice and No. 1 has ruled active at full values on ac-

count of small receipts, but more liberal arrivals are expected just as soon as the hay is fully cured and will permit of shipments. Choice at \$9.00@9.50, No. 1 at \$8.50@9.00, No. 2 at \$7.50@8.00. Prairie clover and straw of all kinds are slow and are not wanted, consequently are selling at values that show no margin in shipping. It is anticipated that a larger demand will exist for this kind of goods just as soon as the cold weather sets in, and better prices are expected. MILLFEED—Receipts small. Market firm. Bran in bulk at \$8.00@8.50. Middlings at \$8.00@9.00 as to quality. When sacks are included \$1.00 more a ton is asked.

RECENT SALES OF ELEVATOR MACHINERY.

We take the following from an extensive list of elevator and mill machinery sold by the Barnard & Leas Mfg. Co. of Moline, Ill., during the month of June:

Waterous Engine Works Co., Winnipeg, Man., one No. 37 Barnard Special Grain Separator. W. Saunders, Chamois, Mo., one No. 32 Barnard Special Grain Separator. W. C. Moore, Western, Nebr., one No. 2 Victor Corn Sheller, one No. 2 Cornwall Corn Cleaner. Forbes Bros., North Topeka, Kans., one No. 1 Victor Corn Sheller. R. B. McCay, Bozeman, Mont., one No. 12 Barnard Side Shake Elevator Separator. Fairbanks, Morse & Co., Omaha, Nebr., one No. 1 Victor Corn Sheller, one No. 2 Improved Corn Cleaner. J. A. Campbell & Son, Lincoln, Nebr., one No. 4 Warehouse Separator. H. J. Diefenbaugh & Co., Washington, Kans., one No. 33 Barnard Special Grain Separator. Francis Fritch Mfg. Co., Cincinnati, Ohio, one No. 2 Barnard Elevator Separator. Merrell Buggy, Implement & Seed Co., Toledo, Ohio, one combined corn sheller and cleaner. Waterous Engine Works Co., Winnipeg, Man., ten No. 35 Barnard Special Grain Separators. Hasting & Co., Elwood, Ind., one No. 1 Victor Corn Sheller. W. W. Stephens & Co., Chicago, Ill., one No. 2 Victor Corn Sheller. Jahn Bros., Manilla, Iowa, one No. 3 Barnard Elevator Separator. H. Mueller & Co., Chicago, Ill., one No. 68 New Method Oat Clipper. W. H. Ferguson, Hastings, Nebr., one No. 2 Barnard Elevator Separator, one No. 34 Barnard Special Grain Separator. Carrington, Hannah & Co., Chicago, Ill., one No. 1 Cornwall Corn Cleaner, one No. 1 Victor Corn Sheller. J. P. Wedel & Co., Moundridge, Kans., one No. 3 Barnard W. H. Separator, elevator cups, bolts, etc. Stuart Hare, receiver, Enterprise, Kans., one No. 32 Barnard Special Grain Separator, one No. 1 milling separator. W. S. Parrish, San Luis, Colo., elevator heads, boots, belt, pulleys, lumber, etc. Dibert Bros. Mfg. Co., San Francisco, Cal., one No. 3½ milling separator. Lockwood, Fay & Henry, Winfield, Kans., one No. 1 Cornwall Corn Cleaner, one No. 0 Cornwall Corn Cleaner, one No. 0 Victor Corn Sheller. Fond du Lac Malt & Grain Co., Fond du Lac, Wis., one No. 3 elevator separator. L. W. Haskell, Savannah, Ga., one No. 33 Barnard Special Grain Separator for rice. H. A. Vanschoiach, Elliott, Iowa, one No. 3 Barnard Warehouse Separator. Seeley, Son & Co., St. Edward, Nebr., one No. 4 W. H. Separator, one No. 1 Victor Corn Sheller, one No. 1 Cornwall Corn Cleaner. Armour & Co., Chicago, Ill., two No. 4 Barnard Elevator Separators.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

ATLAS ENGINE FOR SALE.

For sale, one 70-horse power Atlas Automatic Engine, in perfect order. Been run only three years. Address

SHANNON & MOTT CO., Des Moines, Iowa.

OAT CLIPPER CHEAP.

For sale, a No. 2 oat clipper, manufactured by The S. Howes Co., Silver Creek, N. Y. In perfect order; good as new. Will be sold cheap. Address D. N. DUNLAP, Fontanelle, Iowa.

INTEREST IN MILL AND ELECTRIC PLANT.

For sale, interest in a flouring mill and electric light plant located in one of Michigan's best wheat counties. Have long contract with city and railroad for water supply. Revenue from electric lights and water more than pays for fuel and engineers. Owners have invested all they have and gone into debt to complete plant, and are unable to stock and run it. Address

MICHIGAN, Box 8, "American Elevator and Grain Trade," Chicago, Ill.

SOUTH DAKOTA GRAIN BUSINESS.

For Sale: A grain business in South Dakota, consisting of eleven country stations, and a cleaning house equipped for wheat and flax; also six retail coal sheds. Address

DRAWER "L," Aberdeen, S. Dak.

GRAIN CLEANERS, ELECTRIC MOTOR, ETC., CHEAP.

For Sale: One No. 6 and one No. 3 Owens' Improved Grain Cleaners, used but one season; one 6-horse power electric motor, wiring, shafting, pulleys, belts, etc. In good order. Will sell very cheap. Address

J. G. KOENIG, 154 E. Third St., St. Paul, Minn.

SEVEN ILLINOIS ELEVATORS.

Seven elevators for sale. All in good condition; six of them have gasoline engines, one steam engine. Four are on the C., B. & Q. R. R., three on the C., R. I. & P. R. R. Good corn and oats section. All within 10 miles of Chicago. Address

A. K. KNAPP, Minooka, Ill.

SECOND-HAND MACHINES CHEAP.

One No. 3 Barnard & Leas Warehouse Dustless Wheat Separator and one No. 5 Excelsior Oat Clipper, Separator and Grader Combined; both machines in good condition, about as good as new, for sale cheap. Address

IRVING W. FOX, Rochester, Minn.

ELEVATOR SALE.

To settle up the estate of David Vaniman, deceased, the elevator and grain plant of Vaniman & Sons will be sold at public auction on Monday, Sept. 13, 1897, at 3:30 o'clock p. m., on the elevator premises at Virden, Ill. Description of property: The plant consists of six town lots; iron-clad tin roofed crib elevator, 40x50 feet, 60 feet high, storage capacity 30,000 bushels; two driveways; eight dumps; two sets of elevators; one No. 2 Western Sheller, with cleaning machinery; one No. 5 Eureka Dustless Receiving Separator; one 60,000-pound hopper scale; a Barnard & Leas Three High 9x18 Corn and Feed Roll, with meal bolt; brick engine room, 14x27 feet, tin roofed; No. 5 Fairbanks Gas Engine; oil house; office and fixtures; safe, desks, chairs, etc.; one 6-ton wagon scale; two small scales; warehouse, 30x60 feet; stable, 18x30 feet; small dwelling house. Elevator, mill and everything in good running order—only three years since erected. Virden has 2,500 population, is surrounded by the finest grain land in the state, has two railroads, excellent church and school privileges, and only one other grain dealer. Terms of sale: Half cash; the balance, half in six months, the rest in twelve months, with 7 per cent. interest. Don't forget the date.

ILLINOIS ELEVATOR FOR RENT.

Elevator in the best grain region of Illinois for rent. The best built and most complete house in this part of the state, on the C., C. & St. L. R. R. (Big Four). Has ear corn and grain dump, office scales, hopper scales, one run of 3½-foot French burrs, sheller and cleaner, 30-horse power engine, etc. Must be seen to be appreciated. Handled 75,000 bushels of grain in December and January; is running now. Possession given March 1, 1897. Address

LEVI RICHNER, Mansfield, Ill.

OATS WANTED.

Sealed proposals, in triplicate, will be received here and at office of quartermaster, Fort Wayne, Mich., until 11 o'clock a. m. central time, August 24, 1897, and then opened, for furnishing oats at that post during fiscal year ending June 30, 1898. Proposals for delivery at other points will be entertained. U. S. reserves right to reject or accept any or all proposals, or any part thereof. Information furnished on application here or to quartermaster of station named. Envelopes containing proposals should be marked "Proposals for Oats" and addressed to undersigned, or quartermaster of station named.

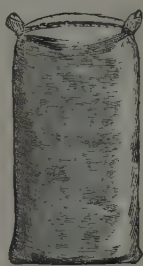
J. G. C. LEE, A. Q. M. G., Chicago, Ill.

NOTICE TO GRAIN DEALERS.

At a meeting of the Board of Railroad and Warehouse Commissioners, held in the city of Chicago, August 6, 1897, the following additional grades and change of grades of grain for the State of Illinois were proposed, the same to take effect on Sept. 1, 1897: Establishing grades to be known as No. 4 White Spring Wheat, No. 4 Hard Winter Wheat, No. 4 Rye, No. 4 Oats and No. 4 White Oats, and changing the wording of the grading of No. 3 Rye and No. 3 Oats. These additions and changes are proposed by authority conferred on this board by the General Assembly of the State of Illinois by an act approved April 25, 1871, and in force July 1, 1871.

CICERO J. LINDLEY,
JOSEPH E. BIDWELL,
CHARLES S. RANNELS,

Railroad and Warehouse Commissioners.

**GRAIN BAGS—BURLAPS.**

All kinds of Bags,
New and Second Hand.

ORDERS FILLED PROMPTLY.

W. J. JOHNSTON,

Factory and Office,
182 Jackson Street, CHICAGO.

E. R. Ulrich & Sons,
SHIPPERS OF
WESTERN GRAIN,
ESPECIALLY

High Grade White and Yellow Corn.

Elevators through Central Illinois on Wabash Ry., Chicago & Alton Ry., C. P. & St. L. Ry., and St. L., C. & St. P. Ry.

Main Office, 6th Floor, Illinois National Bank Building

SPRINGFIELD, ILLINOIS.

Write for Prices Delivered.

To POULTRY RAISERS.

The Complete Poultry Manual is a neat little work which is well worth reading by those interested in poultry, or by boys or girls who want to turn an honest penny. The price is only 25 cents. Sent postpaid on receipt of price. Address

MITCHELL BROS. CO.,

184 Dearborn Street, Chicago, Ill.

ROOFING AND SIDING.**DOES YOUR ROOF LEAK?**

How to Prolong the Life of an Old Roof.

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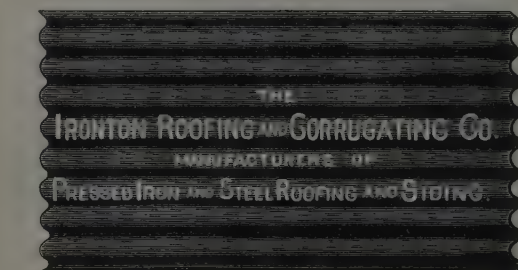
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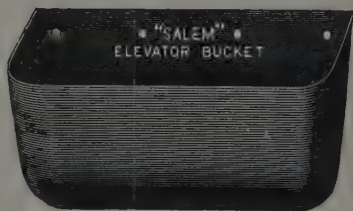
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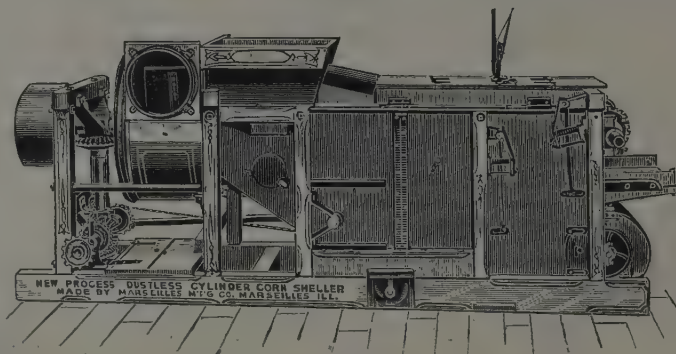
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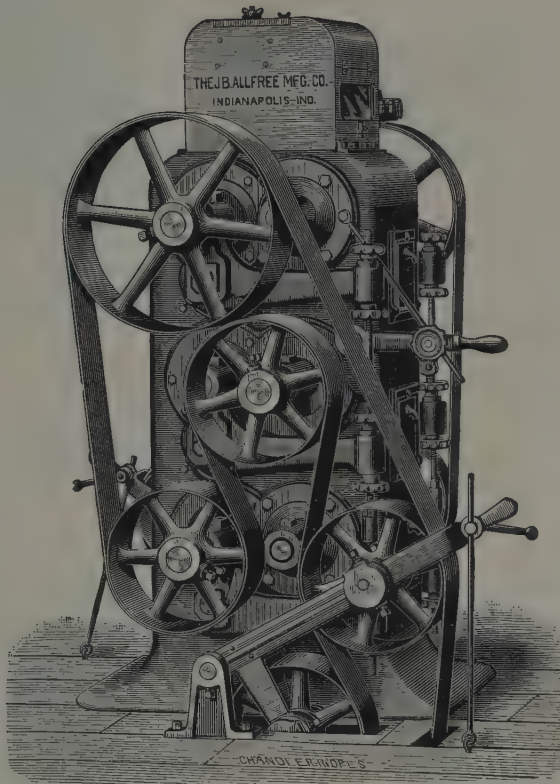
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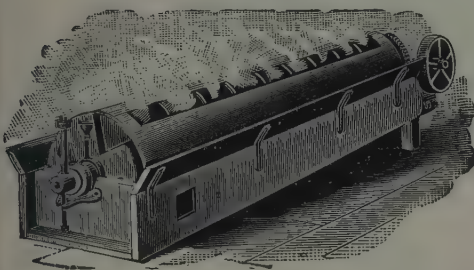
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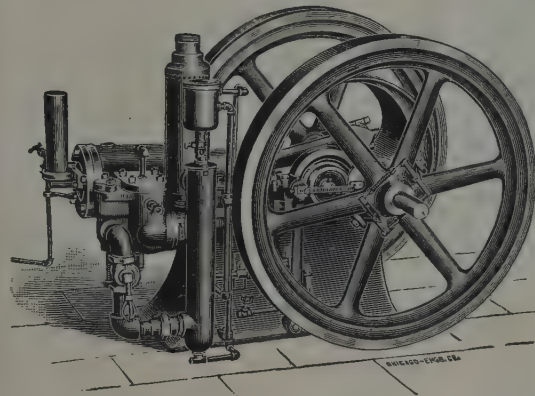
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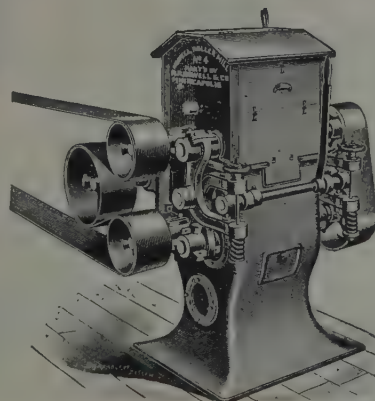
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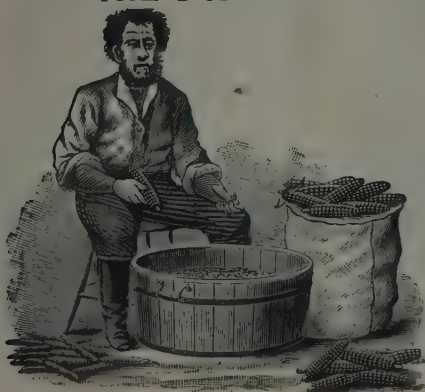


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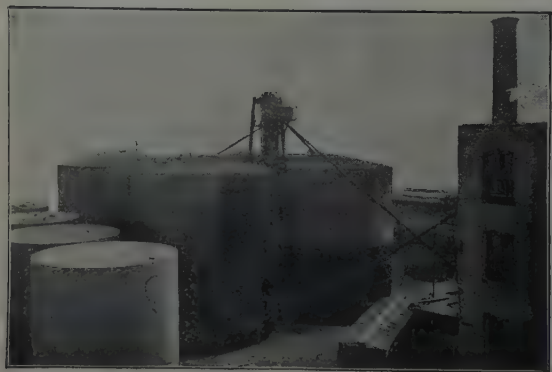
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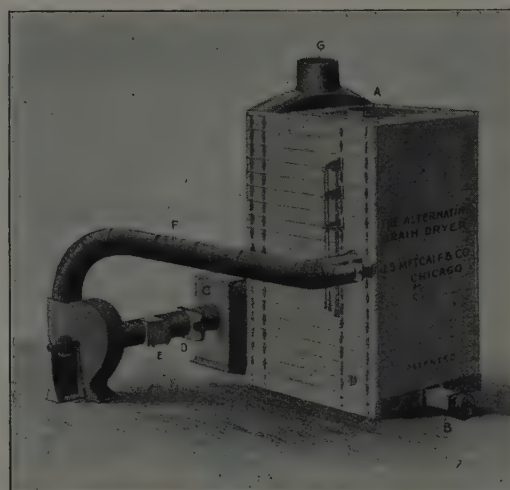
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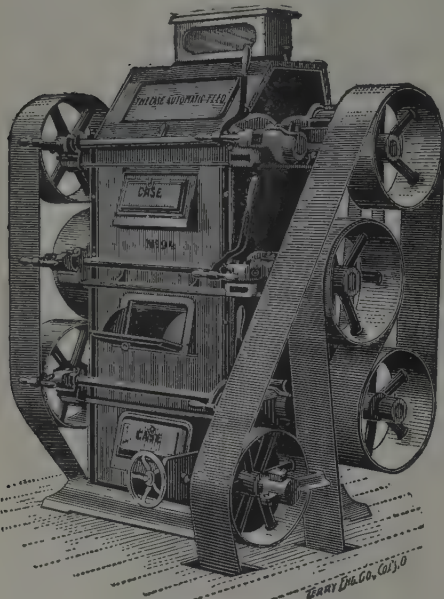
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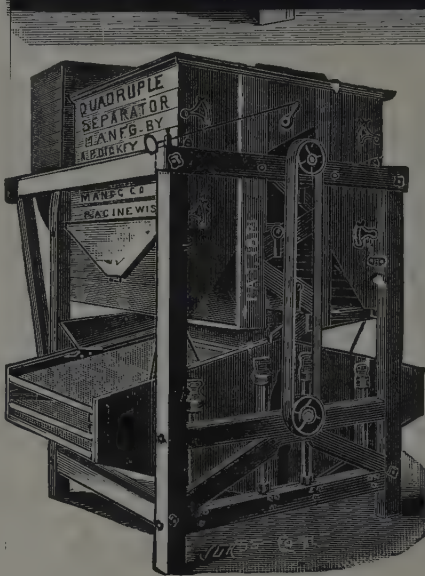
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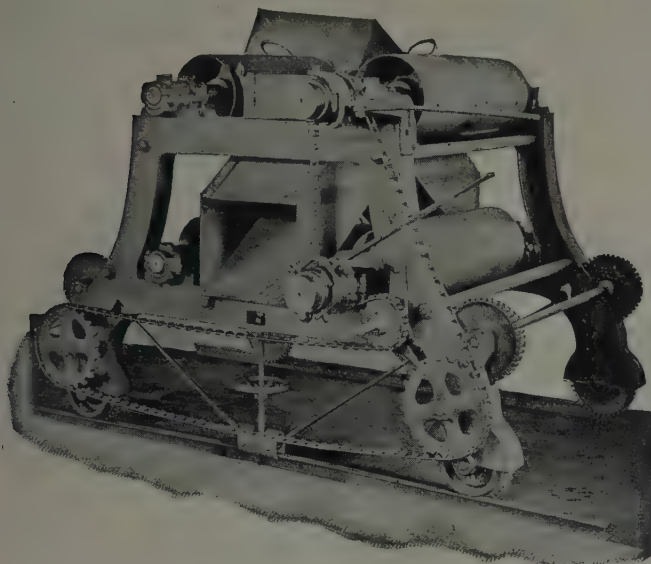
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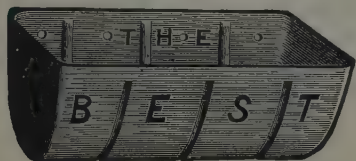
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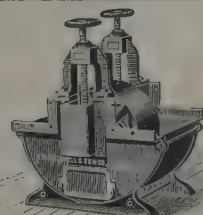
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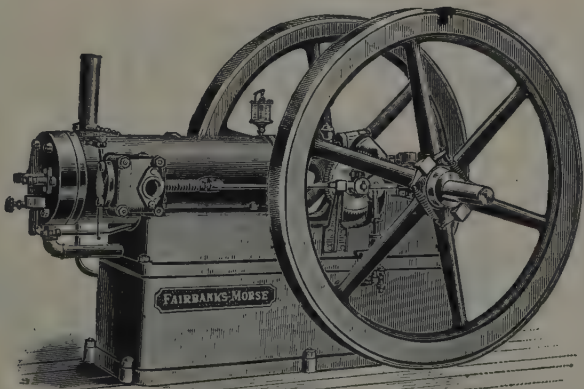
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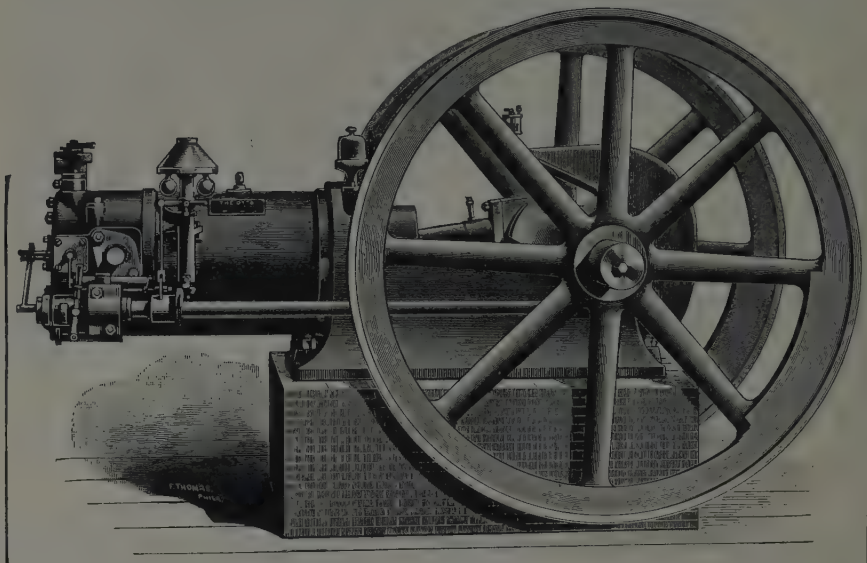
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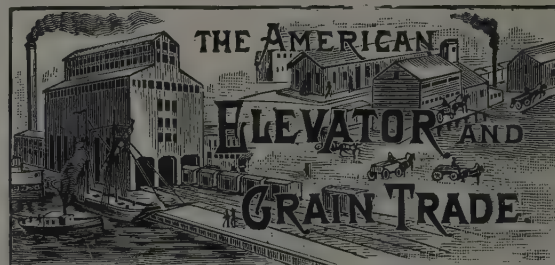
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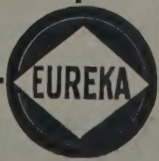
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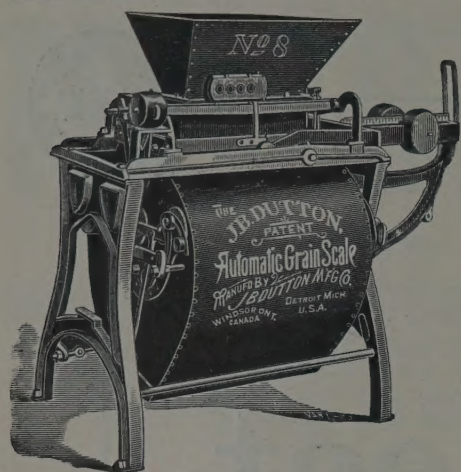
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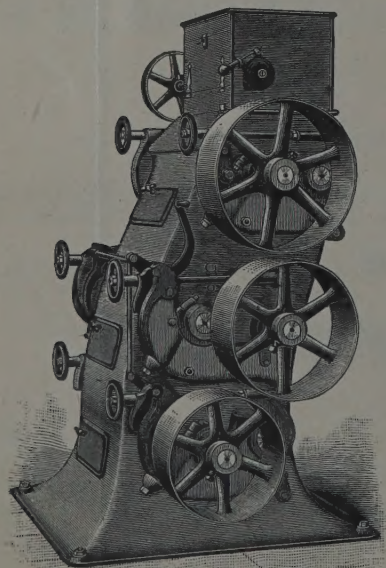
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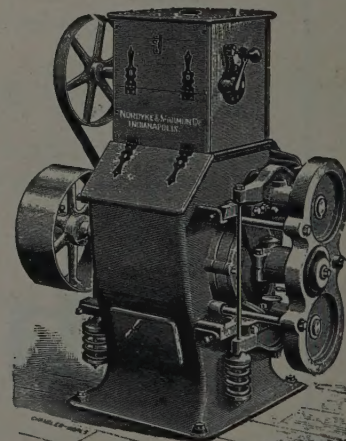


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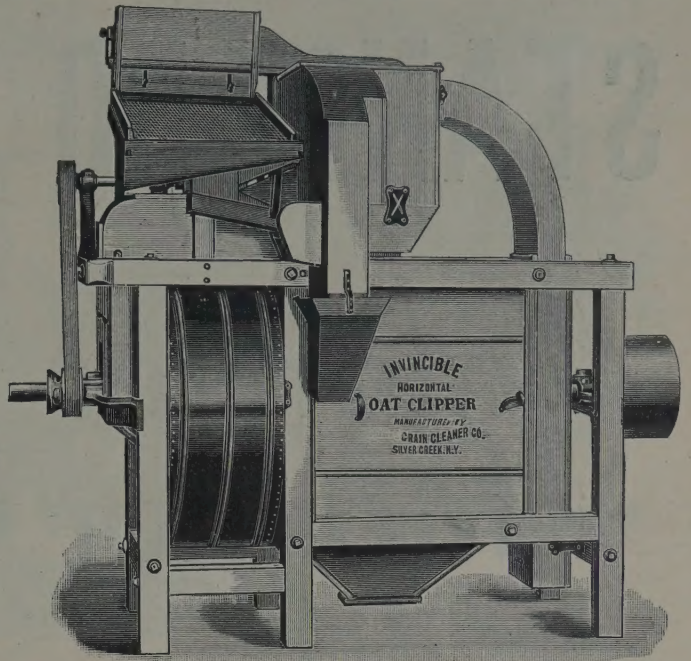
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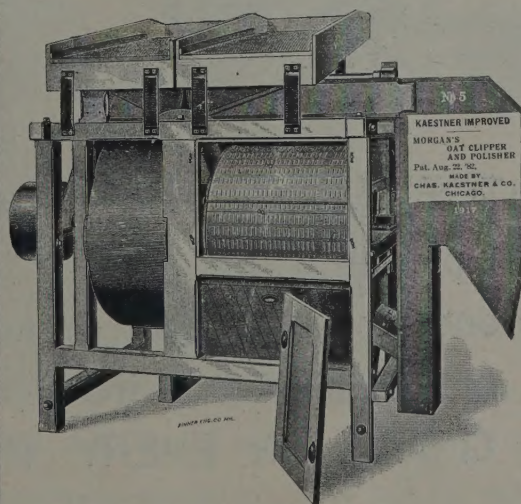
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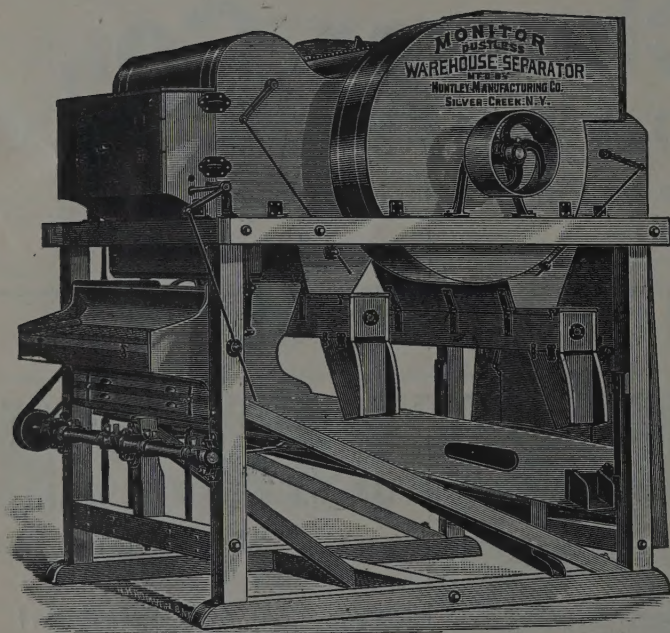
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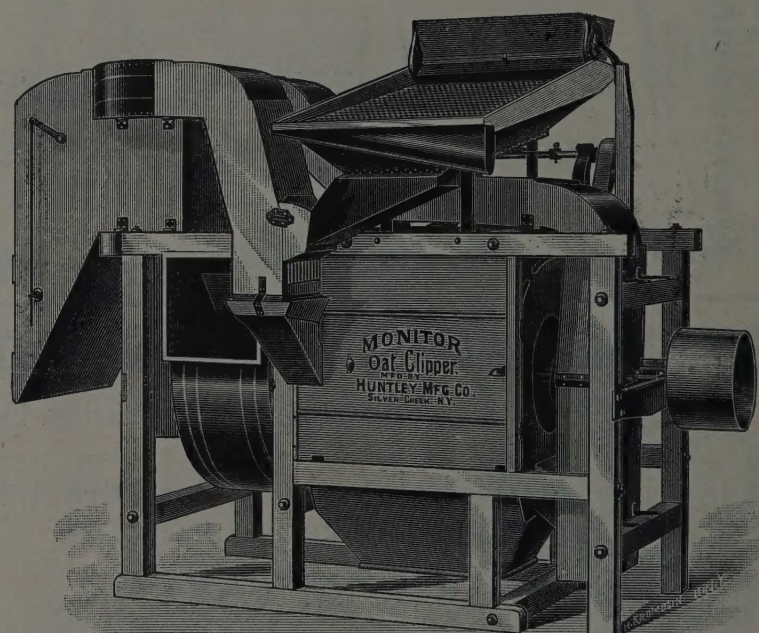


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